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The Vegetable Alkalis.

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Under this title we propose to embrace a general account of all that has yet been published concerning a highly interesting class of substances, for the discovery of which we are indebted chiefly to the labours of the French chemists; and we do so the more willingly, because no such account has yet been given in any domestic publication. We allude to the vegetable alkalis.

It is not altogether clear to whom we are indebted for the first idea of the existence of an alkaline principle, composed of the usual elements of vegetable matter. In 1803, M. Derosne procured a crystalline substance from opium, which dissolved in acids; but he did not determine its nature or properties. In 1804, Seguin observed another crystalline substance in that drug; and read a memoir before the French Institute, containing a relation of almost all its properties as they are now known to chemists; but, although he even noticed its influence on the vegetable colours, he did not pronounce it to be an alkali. Ser-tuerner of Eimbeck, in Hanover, pursuing the same researches about the same time as Derosne, procured both this principle and that observed by Seguin. In 1817, he improved and republished his experiments, and was then the first who unequivocally proclaimed the existence of a vegetable alkali. It was the essential salt noticed by Seguin, now known by the name of

Morphia. Since that time, many of our most energetic drugs have been submitted to analysis by the French and German chemists ; and the result is, that almost every active substance hitherto examined has yielded a peculiar principle, approaching more or less to the nature of an alkali, and possessed in a high degree of the physiological properties of the vegetable from which it has been procured.

The principles already discovered are, *Morphia*, from Opium ; *Strychnia*, from the nut of the *Strychnos nux vomica*, *S. ignatia*, and *S. colubrina* ; *Brucia*, from the bark of the *Brucea antidysenterica*, (false angustura bark ;) *Cinchonia*, from the bark of the *Cinchona condaminea*, *C. oblongifolia*, and *Portlandia hexandra*, (Carthagen bark ;) *Kina*, from the *Cinchona cordifolia*, *C. oblongifolia*, and *Portlandia hexandra* ; *Veratra*, from the *Veratrum album*, *V. sabadilla*, and *Colchicum autumnale* ; *Emeta*, from the *Callicocca ipecacuanha* ; *Delphia*, from the *Delphinium staphisagria* ; *Picrotoxa*, from the *Menispermum cocculus* ; *Solana*, from the *Solanum nigrum* and *S. dulcamara* ; and *Gentiana*,* from the *Gentiana lutea*. Besides these, others have been announced as residing in the *Daphne alpina*, *Atropa Belladonna*, *Hyoscyamus*, *Aconitum*, *Stramonium*, *Capsicum*, *Senna*, and *Piper nigrum*. In short, it is probable that careful examination will detect an analogous principle in almost every compound vegetable drug.

Of those which we have enumerated, however, several will probably be afterwards found to be merely disguised modifications of each other. It is very probable, for instance, that *Kina* and *Cinchonia*, are varieties of one alkali. We are likewise possessed of facts which tend to associate *Strychnia* and *Brucia* under one principle ; but our experiments must be repeated and corroborated before we can venture to give a more decided opinion. Meanwhile, we may venture to suggest to those engaged in this interesting department of analysis, that Chemistry would be more benefited, and perhaps even their own claims enhanced, if they were to connect as much as possible the alkalis of vegetables yet to be examined with the principles already discovered in genera having an analogous action on the animal economy. At all events, on discovering a well defined new principle, no pains should be spared to trace it, not only in the

* The terminations of these names are conformable with what has been already adopted for some of them by several domestic contemporary Journals of Chemistry. Some of them, such as *Emeta* and *Picrotoxa*, might be advantageously changed for names derived from the plants which yield them. But this is not our province.

other species of the same genus, but also in all other genera of similar physiological properties. There is even a belief prevalent among the discoverers themselves, that all those principles are merely varieties of one alkali, differently modified in each by certain other principles ;—an idea which is founded on the very small quantity of acid requisite to neutralize them. This opinion our present imperfect knowledge allows us only to mention ; yet we may remark, that, the existence of one vegetable alkali being proved, there is no reason why there should not be as many more as there are vegetable acids.

They are all prepared nearly in the same manner. At first, they were procured by precipitating them by ammonia from the aqueous infusion of the plant ; but M. Robiquet afterwards improved the process by substituting magnesia. The first object, therefore, is to procure this infusion, which, for some, is done by simple maceration. For others, it is necessary to prepare previously an alcoholic extract, and for others it is proper first of all, to remove the fatty matter by the action of ether. Sometimes it is requisite to remove the colouring matter from this infusion by the action of subacetate of lead, followed by that of sulphuretted hydrogen, to precipitate the excess of lead. The aqueous infusion, whether simple or so prepared, is then boiled with a small quantity of magnesia, which unites with the acid, holding the alkali in solution. The alkali being thus precipitated, is found mixed with the excess of magnesia, an insoluble salt of that earth, and a quantity of colouring, extractive, or resinoid matter. The precipitate being separated and boiled in alcohol, we obtain a dark-coloured solution, in which the alkali crystallizes on cooling, the resinoid matter from its greater solubility remaining behind. The crystals are still tinged with this resinoid matter ; but they are rendered pure by redissolving them in alcohol, boiling with animal charcoal, and crystallizing them anew ; different manipulations of less consequence are employed for each.

In general, the vegetable alkalis assume more or less of a crystalline appearance. Kina, veratra, brucia, emeta, delphia and solana, have not yet been regularly crystallized ; strychnia and picROTOXA crystallize in quadrangular prisms ; cinchonia and gentiana in needles too minute to be distinctly surveyed ; morphia in quadrangular prisms according to Thomson, in single and double quadrangular pyramids according to Choulant and Ser-tuerner, and in slightly flattened hexangular prisms according to all the specimens which we have ourselves prepared, or have procured from the Parisian *pharmaciens*.

Their colour is white ; gentiana alone is yellow, and this

perhaps arises from impurities. Commonly they have more or less of a pearly lustre. They are all inodorous. Their taste is generally bitter in various degrees. That of strychnia, brucia and picrotoxa, is most insupportable and lasting. Indeed, that of strychnia is probably the most powerful of tastes ; it is perceptible when a grain is dissolved in eighty pounds of water.

They are not altered by air or light. They are decomposed by a moderate heat ; most of them previously melt, some at a temperature inferior to 212° . others not till they are about to be decomposed. The principle of hyoscyamus is said to resist a low red heat. Analyzed by the deutoxide of copper, they yield carbon, hydrogen and oxygen ; but no azote, unless they have been prepared by precipitation with ammonia.

Their solubility in water is very small, but is rendered in general greater by the presence of the colouring or resinoid matter. All, or nearly all, are very soluble in alcohol. Ether readily dissolves delphia, veratra, kina, emeta, and gentiana ; but morphia, cinchonia and picrotoxa, are very sparingly soluble ; and brucia and strychnia are nearly insoluble.

Excepting gentiana, they all restore the vegetable blues previously reddened by an acid ; some of them, such as morphia and delphia, tinge turmeric and violets.

They combine with the acids. In general, they form neutral salts ; but it appears that veratra, emeta, and perhaps also picrotoxa and delphia, always unite with an excess of acid. All the combinations with the mineral acids, excepting the salts of picrotoxa, are exceedingly soluble in water ; and, with the exception of the nitrate of cinchonia, and all the salts of veratra, they are crystallizable. The acetates too are in general soluble, though not always, and they are disposed to form supersalts. All the oxalates, except of picrotoxa, and all the tartrates are rather insoluble, and have likewise a tendency to unite with an excess of acid. The oxalate of picrotoxa is the most soluble of its salts. The gallates of cinchonia and kina are very insoluble, a fact which explains the effect of the infusion of galls on their solutions. There is no particular phenomenon in the action of most of the acids when they form those combinations. That of concentrated nitric acid, however, is sometimes very peculiar. It converts the greater number into artificial tannin ; but it seems to peroxidate morphia, strychnia, and brucia, rendering them less powerful as salifiable bases, and diminishing or destroying their action on the animal economy. It is very remarkable too, that the products, so formed, are restored to their original condition by proto-hydrochlorate of tin, sulphuretted hydrogen, and other disoxygenating substances. In general, these alkaline

principles act upon iodine and chlorine in the same manner as the ordinary alkalis, that is, the water is decomposed, and the oxacids and hydracids so formed, enter each into combination with a portion of the salifiable base. Chloric acid seems to have a tendency to act on strychnia in the same manner as nitric acid.

All the salts of the vegetable alkalis are decomposed by ammonia. Their order of affinity, in relation to each other, as derived from the proportions in which they unite with acids, is laid down in the following Table of the quantities of sulphuric and hydrochloric acids, which combine with 100 parts of each base :

	<i>Cinchonia.</i>	<i>Morphia.</i>	<i>Picrotoxa.</i>	<i>Kina.</i>	<i>Strychnia.</i>	<i>Brucia.</i>	<i>Veratra.</i>
Sulphuric	13.02	12.46	11.11	10.91	10.48	9.67	6.64
Hydrochl.	9.03	8.62		7.08	7.61	6.63	4.32

We have not yet received a detailed account of the salts of the other alkalis. It appears, however, that atropia exerts a greater neutralizing power than any other of them ; its sulphate consisting of 38.93 base, 36.52 acid, and 24.55 water of crystallization.

In their natural state, they commonly exist in combination with peculiar acids ; a few of them are found in the state of malates.

When we survey this general view of their chemical properties, it is apparent that their title to the name of alkali is sufficiently distinct. They restore colours altered by acids ; their action with chlorine and iodine is the same as that of the acknowledged alkalis ; and, in uniting with acids, they form for the most part neutral and crystallizable salts. Nor ought we to omit, in this enumeration, the property which some of them possess, of combining with an additional quantity of oxygen, so as to form peroxides.

The vegetable alkalis are endowed with a powerful influence upon the animal economy ; and it is a law hitherto universal, that they concentrate in themselves all the physiological properties of the vegetables to which they belong. It is worthy of remark, however, that, although their effect is much greater than that of the undecomposed vegetables, the same quantity of alkali is not so powerful in its pure form, as in its natural state of combination. Thus, six grains of morphia produce no more effect than six grains of the watery extract of opium, which are equivalent to 12 grains of the opium itself ; yet, in these 12 grains,

there is not above a sixteenth part of morphia. The acids render their action much more energetic, chiefly, or perhaps solely, by increasing their solubility. Alcohol, and in general fixed oil, have the same effect. Those of them which act as poisons, namely, all but gentiana, cinchona, and kina, show their agency in whatsoever manner they are introduced into the system; and, like the vegetable poisons in their ordinary state, they act more forcibly on the serous membranes than upon the stomach, and more violently still, when they are introduced into the cellular tissue, or directly into the veins. It is not improbable that this difference is owing to their being, in part, decomposed by the processes of absorption and digestion. Most of the poisonous alkalis, especially those yielded by narcotic plants, seem to exert their influence on the nervous system, through the medium of absorption. But others (and even some of the narcotic alkalis when given in small doses) produce their fatal effect more slowly, by inducing inflammation of the intestinal canal.

All observers agree that *Morphia* acts as a powerful hypnotic. Uncombined, however, it has no action on account of its insolubility. A solution of the pure principle in olive oil (and probably also in* alcohol) is almost twice as powerful as the same quantity of the watery extract of opium. United with sulphuric, hydrochloric, or acetic acid, it exerts an energy equal or somewhat superior to the same quantity of watery extract; and it appears that the mineral acids have more efficacy than the acetic in neutralizing its deleterious properties. The extract of opium, deprived of morphia, has no influence. In general, however, it does produce a slight but sufficiently obvious effect, which has been rightly supposed by M. Orfila to arise from a portion of morphia remaining behind, after the action of the magnesia. We have found, in truth, that, after separating the morphia by the action of magnesia, and then evaporating the infusion to prepare this inert extract, a brown scaly matter is deposited in abundance, while the infusion continues quite fluid; and these scales are, in a great measure, composed of morphia, united with extractive or colouring matter. Of course they are allowed to remain in the ordinary mode of making the extract. It would lead us into too extensive details, were we to attempt to give an outline of the experiments of M. Orfila, by which he arrives at those conclusions. The experiments

* These facts being ascertained upon dogs, comparative experiments have not been made with the alcoholic solutions. These animals cannot be used for this purpose, as a small quantity of very diluted alcohol is nearly as injurious to them as opium itself.

have every appearance of being accurate ; and M. Orfila's great experience and fidelity entitle him to full credit. We may observe, however, that the reports of the state of the animals, while under the influence of the poison, are, for the most part, given at too distant intervals. In experiments made with so energetic a substance, much of their value and interest depends on the animals being closely watched, so that every change may be noticed as soon as it takes place ; and, in the present instance, the nature of the reports bears internal evidence that this has not been done.

A few observations of much interest are given by Sertuerner on the effect of the alcoholic solution of morphia on himself and three of his pupils. He found, that repeated small doses of half a grain produced at first decided excitation, then weakness, numbness, and tendency to fainting. After swallowing vinegar while in this condition, violent vomiting was excited, profound sleep intervened in one delicate individual, and next day he was tormented with nausea, vomiting, headache, anorexia, constipation, and heaviness. Notwithstanding this unequivocal experiment, a conjecture has been started by M. Magendie, that morphia produces a pure soporose state, and is exempt from the idiosyncratic action and after effects, which so often attend the use of opium. These effects he ascribes to the presence of another peculiar principle in opium, namely, the salt of Derosne, now more usually denominated Narcotine. Though noticed long ago by Derosne, it was constantly mistaken for one of the salts of morphia, till M. Robiquet pointed out its distinctive properties. It is an azotised substance, crystallizing in beautiful pearly prisms or tables ; soluble in fixed oil, and still more in ether and the acids ; insoluble in water, and little soluble in alcohol ; destitute of action on the vegetable colours, and incapable of neutralizing acids. These properties distinguish it from the vegetable alkalis, and especially from morphia ; but its precise nature is not yet sufficiently understood. We may add, that we ourselves have examined it with some care ; and all our observations agree with those of M. Robiquet, excepting so far as regards the form of its crystals. The crystals of Sertuerner, and we believe also those of Robiquet, were quadrangular pyramids with rhomboidal bases ; all those which we have procured have been rectangular tables bevelled on all the edges. the experiments of MM. Orfila and Magendie on the physiological effects of this substance differ considerably ; yet they coincide in attributing to it not so much a soporific as a mere stupefying power, which does not manifest itself till several hours after it has been swallowed. When eight or twelve grains, dissol-

ved in olive oil, are given to dogs, death takes place some time betwixt the first and fourth day. The narcotine may be entirely removed from the extract of opium by macerating it in sulphuric ether, as was first pointed out by M. Robiquet; and in this way a preparation is procured, which, like morphia, has been supposed exempt from the occasional bad consequences of the common drug. No decisive experiments, however, have yet been made with this purified extract; and yet nothing could be done more simply; it is only necessary to give it to a few individuals on whom the ordinary extract has a deleterious influence. There is one good case of the salutary effect of morphia on an idiosyncratic habit, related by M. Magendie, in the *Nouveau Journal de Medicine*, X. 23; in opposition to which, we of course cite that already quoted from the memoir of Sertuerner.

M. Magendie, in his *Formulaire*, &c. proposes to employ the sulphate and acetate of morphia instead of the usual preparations of opium; but the great additional expense for a drug, already high priced, and in such extensive use, must prove a considerable bar to their general introduction, unless they really possess the advantages mentioned above. M. Vauquelin has recently observed, that the opium from the indigenous poppy contains about as much morphia as the best opium of the Levant. If it should be also found (as is most likely) in the expressed juice or infusion of the fresh capsules, perhaps a process may be found for procuring the alkali at a much more moderate expense. M. Magendie starts a proposition, that by ringing changes on the salts of morphia, its hypnotic effect may be kept up without increasing its dose; a very unlikely idea, to say the least of it.

We cannot leave this important subject, without noticing the explanation now afforded of the observations published some time ago by M. Orfila in his *Toxicologie Generale*, concerning the impropriety of the early administration of acids, and especially of vinegar, in cases of poisoning by opium. In fact, while the poison remains in the stomach, acids augment its energy, by accelerating the solution of its active principle. But, when it has been removed, acids become very beneficial, as M. Orfila has himself indeed observed. Yet his caution is perhaps not to be understood as being without exception; for his experiments still leave one point unexplored, concerning the agency of acids. The solution in alcohol, the most ordinary vehicle of opium, when swallowed for the purpose of self-destruction, is probably more energetic than the combinations with the mineral acids; although we must remind our readers that no experiments have been made to compare the tincture with the other solutions.

But if it should prove more energetic, and as it is certain that sulphuric acid neutralizes the deleterious properties of morphia much more than the acetate, it may be found that the mineral acid diminishes the energy of a tincture present in the stomach, although vinegar would augment it. This however, is, after all, a point of no great moment in a practical view, as it is an excellent general rule, that neither acid nor any other corrective is to be administered, till the poison has been thoroughly ejected from the stomach.

Strychnia possesses in a very high degree, all the noxious qualities of *nux vomica* and the other *strychni*. It is, perhaps, the most powerful, and, next to hydrocyanic acid, the most rapid of poisons. M. Magendie has killed a dog with one eighth of a grain, and we have ourselves seen one die in two minutes after the injection of one sixth of a grain into the cavity of the pleura. The phenomena which take place are precisely the same as those which characterize the use of the *strychni*; namely, the animal is affected with violent and well-marked tetanus, and no organic lesion is observable after death. It was easy to foresee that so energetic a substance would soon become a favourite article of the *Materia Medica*. Accordingly, we find M. Magendie, in his *Formulaire*, recommending it in "toutes les maladies avec affaiblissement, soit local, soit general; les paralysies de tous genres, generales ou partielles;" and indeed we understand, that in Paris, its use is just as indiscriminate as M. Magendie, by this recommendation, could desire to make it. It has been very much employed in palsy, and in some instances pushed so far as to induce tetanus. Its efficacy in this disease has been commended in the most unqualified manner; and M. Fouquier of La Charite has made some clinical observations upon it, which have not yet reached us. We may observe, in the mean time, however, that we have good reason to know that many of the patients, supposed to have been cured, were re-attacked soon after they left the hospital. M. Magendie adds, that he has used it for exciting indolent stomachs (*estomacs paresseux*.) Surely, when we possess so many pleasant, efficacious, and innocent bitters, even among the new remedies noticed in his *Formulaire*, it is an effort of the blindest attachment to propose the substitution of so formidable and disagreeable a remedy.

Brucia produces precisely the same effects as the last alkali, but in a feebler degree.

Veratrum in large doses has also the same effect. In less quantity it excites vomiting, and promptly relaxes the intestines; but those symptoms are often very violent, and accompanied with inflammation. It is, therefore, with some surprise that we find

M. Magendie using it "pour certains vieillards, chez lesquels il existait une accumulation enorme de matieres fecales dans le gros intestin." We believe that even British physicians, with all their fearlessness in the use of drastic purgatives, will hardly dare to follow him. Veratrum is likewise a most powerful but dangerous sternutative.

Delphinium, in the dose of six grains, produces nausea, vomiting, vertigo, and convulsions, which usher in inflammation of the stomach; and death ensues in two, three, or four days. Dissolved in acetic acid, it kills in forty or fifty minutes, without producing inflammation.

Emetina given to dogs, in doses varying from half a grain to three grains, occasions vomiting of longer or shorter duration. Ten grains produce it in a more violent degree; and death follows within 24 hours, from inflammation of the tissue of the lungs, and of the mucous membrane of the digestive canal. This observation is rather an interesting one, as it associates this emetic with the tartrate of antimony, which in over-doses produces the same morbid appearances. There seems to be no great advantage in substituting emetina for the ordinary powder of ipecacuanha, excepting that, its taste being much less offensive, it may be very easily given to children.

Accurate experiments have not been made with the other poisonous alkalis.

Gentiana is not a poison. M. Magendie has injected it into the veins without any obvious effect, and has himself swallowed two grains without experiencing any sensation but that of extreme bitterness, followed by gentle warmth in the region of the stomach. He proposes to introduce into the *Materia Medica* a tincture, containing five grains in each ounce of diluted alcohol. We see no reason whatever why this preparation should displace our compound tincture of gentian, or even the *tinctura amara* of the Parisian codex.

The discovery of the alkaline principles of bark, promises to be of considerable importance. Gomes, of Lisbon, was the first who procured *cinchona* in a state of purity; but he was ignorant of its alkaline nature, the first observation of which we owe to Labillardiere, nephew of the celebrated navigator. Its existence was pointed out long before by Dr. Duncan, junior, who inferred, from the action of certain reagents on the infusions of bark, that it contained a peculiar principle; and he was also the first to denominate it cinchonin. MM. Pelletier and Caventou, in their history of previous analyses, have omitted this remark of Dr. Duncan;—an omission the more unaccountable, that Gomes himself, who is quoted by them, makes distinct men-

tion of it in his memoir. The discovery of kina, the other principle of cinchona, belongs entirely to the French chemists.— We would advise our readers to peruse carefully the little memoir of MM. Pelletier and Caventou, and we regret that our limits do not allow us to give an abstract of it. It is a perfect model of this kind of analysis, and brings us nearer to the actual, pure proximate principles composing a complicated substance, than any other analysis yet executed. The same we have no doubt will be done for opium by M. Robiquet, who has been lately engaged in further researches on this substance, and has already, we understand, made some important additions to his former discoveries. *Cinchonia* and *kina* exert no immediate apparent action on the economy. The clinical experiments of M. Chomel, of La Charite, establish that kina possesses, in a high degree the febrifuge virtues of the common bark. One or two doses (varying from 6 to 16 grains) of the sulphate, generally checked the paroxysms of regular intermittents. Of 13 patients, 10 were cured, 5 by the first dose, the others after the second. In two of the remaining three, the paroxysms became milder; in the thirteenth no abatement was produced; and in all the three the ordinary bark was afterwards tried with no better effect. The precautions which he used to remove all sources of fallacy, render his results unquestionable; and we are happy to find them completely confirmed by a few cases published along with them by M. Double, Pelletier's brother-in-law. M. Bally, of Paris, and M. Duval, of Brest, have likewise published similar experiments, leading to the same conclusion; but these we have not yet been fortunate enough to procure. The observations of M. Double likewise go to prove, that the unpleasant effects produced on the stomach by the bark, are rarely or never occasioned by the sulphate of quina. The sulphate of kina from the Carthagen bark, and the sulphate of cinchonia, have been each tried only once, and both failed. Of course, no inference whatever can be drawn before further experiments are made. When the various kinds of bark, at different times substituted for cinchonia, shall have been analyzed, and their products examined therapeutically, we shall be able to form a just estimate of the value of this discovery. At present, we can only notice the explanation which MM. Pelletier and Caventou's experiments enable us to give of the supposed superior efficacy of red bark. This species contains both kina and cinchonia, and each in larger quantity than any other species; the pale bark contains only cinchonia, and the yellow bark only kina. The *Portlandia hexandra*, in its composition, is closely allied to red bark. If those principles be also found in the *Cusparia febrifuga*, *Swietania*

febrifuga, *Aristolochia serpentaria*, &c., and possess the same medicinal properties as those derived from the different species of cinchona, we need not attempt to show how much the simplicity and energy of our *Materia Medica* must be increased.

During the course of the preceding observations, it has been our object to enable our readers to gather from them as accurate an idea as possible, of the present and future advantages likely to accrue from the discovery of the vegetable alkalis. It has been our object, above all, to avoid an error committed by almost all those who have interested themselves deeply in the subject, and by none more than by our rival neighbours;—namely, a belief that those principles may be advantageously substituted for the drugs which depend upon them for their therapeutic efficacy, and that, in fact, medicine is to take a new spring from the moment when this shall have been accomplished. In substituting new remedies for those in general use, three points must be held in view,—simplicity, energy, and cheapness. As to the first of these, there can be, in the present instance, but one opinion. We do not consider that a superior, or rather a preferable, or more useful energy, has yet been proved to reside in most of the vegetable alkalis: excepting the experiments of M. Chomel on kina, we have seen hardly any trustworthy clinical researches on the subject. The greatest objection of all is, that the price of our remedies must be prodigiously increased. In employing the alkalis instead of the vegetables, not only is the expense augmented by the process for their preparation, but they actually do not possess nearly the same degree of energy as they do in their natural state of combination. That is, if an ounce of any vegetable matter contains 30 grains of an alkali, those 30 grains are not so powerful in their pure state, as when they are united with other principles to form an ounce of the undecomposed vegetable. We have no means of conjecturing whence this proceeds. There is much reason to expect, however, that the thorough chemical and therapeutic investigation of opium and cinchona, will be attended with results most profitable to medicine. Several chemists and physicians are at present occupied with this research; and, as soon as any thing decisive and important shall have been ascertained, we shall not fail to submit to our readers a more detailed account of the analysis and physiological and therapeutic properties of those two remedies.

II.

M. FALRET on *Suicide and Mania*.

(From the Quarterly Journal.)

M. FALRET is the pupil of Esquirol, and in the work which we now purpose to examine, he has favoured us with opinions, probably imbibed under the auspices of that celebrated physician. His Treatise on Suicide occupies three-fourths of the volume, and he has thought proper to call it a disease, and treated it as such, in consequence of its being, perhaps, always the result of a distempered brain. Man naturally fears death, as what will deprive him of present happiness, or of that which he hopes to obtain at some future period. But, even when happiness is his only object, if physical sufferings assail him on all sides, his imagination becomes gloomy, and forgetting the ties which ought to bind him to society, he rushes voluntarily into the arms of death. May we not say then, that suicide is in most instances the result of distempered self-love? That death, therefore, which the madman inflicts upon himself in a paroxysm of senseless fury, is not considered by M. Falret as suicide; in his opinion it is not suicide, unless the slayer of himself is conscious of the action, and unless it be the result of his own positive determination. He excepts, however, from this class, those generous men, who, like a Curtius or a Codrus, have devoted themselves to death for their country. We shall now follow our author in his detail of the causes, symptoms, post-mortem appearances, and remedies in cases of suicide.

Of the PREDISPOSING CAUSES the author treats first of *hereditary disposition*; and assures us, however extraordinary it may appear, that suicidal melancholy seems to be the most readily transmitted from parent to child. M. Falret has seen repeated instances of this. A person committed suicide at Paris, and his brother was sent for from the country to attend his funeral. On seeing the body, he was much agitated, and said that both his father and his brother had died by their own hands; and that he himself had been often strongly tempted to follow their example. A similar instance is mentioned by Rush. Other species of hereditary madness are generally announced by some singularities of manner, but this is rarely the case with suicide. Individuals of the melancholic temperament, whose natural disposition is gloomy, restless, haughty, and unyielding, are strongly inclined to be discontented with their lot, and to be weary of life. Such was Chatterton, who at the early age of eighteen put an end to his existence. Those, too, of the sanguine temperament are disposed by their natural impetuosity so to magnify their miseries,

that frequently in a paroxysm of impatience they commit suicide. Persons, likewise, of the nervous temperament are often so tremblingly alive, that the least contradiction irritates them ; and consequently very slight causes will drive them to fury, or plunge them into profound melancholy.

As to AGE, infancy is little susceptible of this malady ; yet, when actuated by envy or jealousy, orphans of eight years old have starved themselves to death ; and our author knew a boy, twelve years old, who hanged himself because he was only the twelfth in his class. A similar case occurred about a year ago at Westminster school. Youth is liable to melancholy, and often feels life painful ; but manhood is the age in which suicide has obtained the greatest number of its victims. Old people are least disposed to suicide, being generally as anxious to prolong life as to amass wealth ; yet there have been instances to the contrary, but these were more frequent in ancient than in modern times. We seem indeed most anxious to cling to life when we possess the least of its vigour and buoyancy.

Women, from their natural delicacy and sensibility, have much less inclination to suicide than men, unless they are actuated by some strongly-exciting cause. According to the computation of MM. Falret and Esquirol, the number of suicides is three times greater amongst men than women. Out of 495 suicides in France, only 113 were females.

The EDUCATION of children may be so conducted as to produce madness ; the opposite extremes of severity or indulgence leading to it almost invariably ; and the author here remarks, that, as the religious impressions made on the young mind are generally indelible, they may produce dangerous consequences, if they are of a gloomy cast. Too much study also will dispose to suicide, literary men sometimes imagining that they are deprived of understanding, that they are unfit for the common duties of life, and condemned to poverty. Those likewise who give themselves up to the reveries of imagination, or who devote their whole time to one subject, or have a fondness for theory and hypothesis, are very apt to become its prey. Those studies, too, which are adverse to the genius of the individual, as in the case of Chatterton, are not unfrequently the forerunners of suicide. If the books put into the hands of youth for their amusement or instruction, which too often contain an unfaithful picture of human life, are not carefully selected, the very exercise of the understanding may become a cause of voluntary death. Even music may be productive of much danger if a person of the nervous temperament devotes himself so keenly to it, as to neglect bodily exercise, which is at all times so necessary to life. The

representations of the theatre also have not unfrequently done harm ; for it is hardly possible that a young mind, if predisposed to insanity, can witness the voluntary death of Cato, Lucretia, Dido, &c. extolled and honoured, and graced with the ornaments of poetry, without being strongly, and perhaps fatally affected.

Far too much scope has been ascribed to CLIMATE in the production of suicide, even Montesquieu has exaggerated its effects ; and therefore M. Falret has been at some pains to prove that it is but a very slight predisposing cause. The foggy climate of England has been much blamed ; but in other climates, equally gloomy—Holland for example—suicide is by no means common ; and besides, it is only within the last two hundred years that it has been so frequent in England. Summer and autumn seem to be the seasons most favourable to its production. Cheyne mentions autumn and the west winds, and we are informed by Cabanis, that the autumn is prolific of melancholy, if the preceding summer has been very hot and dry, and particularly if the autumn itself is damp, cold, and changeable.

After some general remarks on *onanism* and idleness, particularly *idleness in solitude*, which have been so much insisted on by Tissot and others, as predisposing to suicide, our author turns his attention to the direct existing causes ; of which none have a more determinate or often a more fatal effect upon our intellect than the PASSIONS. Of these *love* is in the first rank : and taken in all its modifications, no other has been so often the cause of suicide. Jealousy also often occasions such misery to its victim as to make him end his sufferings in death ; and ambition, whether at the summit of its wishes or disappointed of its object, frequently has the same effect. Wounded pride, forced humiliation, dishonour, or affronts real or imaginary, violated chastity and shame have been frequent causes of suicide. In a paroxysm of anger many have fallen by their own hands ; and how often has the gamester thus ended his career ? In speaking of fear as a cause of suicide, M. Falret tells us of a woman, who had often entreated him to kill her, because she imagined she should survive the whole world, and should not then know what to do with herself. Charles VIIth, who had driven the English out of France, starved himself to death, from the fear of being poisoned by his own son, the Dauphin. Remorse also often produces suicide. In order to illustrate the whirlwind of the passions in which they have neither aim nor object, he has given the beautiful episode of Rene from the pen of M. de Chateaubriand, with which we presume most of our readers are acquainted. Domestic cares also, and adversity or a reverse of fortune, have but too often been the precursors of a voluntary death.

Many were the suicides occasioned by the fall of the Roman commonwealth ; and if, says M. Falret, I give no instances from the history of the French Revolution, what French reader is there who cannot supply them for himself ? However, it often is not the loss of fortune which causes suicide, but the wound given to self-love.

As to the INDIRECT exciting CAUSES, the author thinks that the effects of ardent spirits, mercury, and opium, in producing suicide, have been greatly exaggerated ; and he thinks that in every instance where they are blamed some more powerful cerebral cause might be detected. In this class of causes, physical pain has been often placed ; and Pliny mentions stone in the bladder with total suppression of urine, as one of those diseases which may authorise a man to commit suicide. But even in diseases most likely to produce it, such as the *fillagra* (an Italian disease,) it probably may in reality depend on a cerebral cause. In many instances, however, it would appear that leprosy, scurvy, rheumatism and cancer, have induced suicide, either by their loathsomeness, or the severity of their pains. Yet in our author's opinion, when a woman, at the time when menstruation ceases, makes an attempt at suicide, it is oftener occasioned by the loss of beauty or the power of pleasing, than by any physical ailment. He gives the case of a very interesting woman, who at that critical period, having a cancer in the nose, tried to hang herself ; but being prevented, she confessed afterwards that she had been driven to the attempt by the fear of becoming an object of disgust to a husband whom she loved.

With respect to those GENERAL CAUSES, whose influence is not confined to any fixed period, or any particular situation, the government of states is the first that claims notice. In a despotic government there are few madmen, and consequently suicide is extremely rare ; except at that awful crisis when a free state passes into despotism ; or in horrid tyrannies, like that of Japan, where the slightest crime, or even an attempt at crime, is punished with death ; and death becomes so familiarized to the people, that a Japanese rips up his belly with all imaginable coolness. The profession of a soldier naturally leads to a contempt of life ; but it is only in the idleness of peace that he commits suicide or becomes a duelist. In active warfare he hardly ever seeks death voluntarily ; not even in the greatest reverses : in the disastrous Russian campaign, suicide was hardly known in the French army. Republics, with some exceptions, are favourable to suicide. It is not, however, in the time of civil commotions that suicide is most prevalent ; it is either immediately before their commencement, or when they are subsiding into a

state of calmness ; in the first, the apprehension of unknown calamity ; in the second, the uncertainty of domestic losses, appal the mind and drive it to destruction. In a state of civilization, when almost every person has acquired a certain degree of knowledge, the mind is often called to exertions greater than it can bear ; the passions are more violently agitated ; and the desires are more craving in proportion to the difficulty of satisfying them ; and it is then that suicide is common. In Russia it is little known ; but in England, France, Italy and Germany, it is frequent.

Some RELIGIOUS SYSTEMS, as those of the Druids, Odin, and Mahomet, by inspiring the mind with a contempt of death, have made many suicides. Christianity is inimical to it, by inculcating resignation to the divine will ; but corrupted Christianity, not being free from fanaticism, has been too frequently rendered the occasion of suicide. On the other hand, the man who believes that death is an eternal sleep scorns to hold up against calamity, and prefers annihilation. The sceptic, too, thus often frees himself from the agony of doubting. The maxim of the Stoics, that man should live only so long as he ought, not so long as he is able, is, we may say, the very parent of suicide. The Bramin, looking on death as the real entrance into life, and thinking a natural death dishonourable, is eager at all times to get rid of life. The Epicureans and Peripatetics ridiculed suicide as being death caused by the fear of death. M. Falret goes perhaps too far when he pretends that the grateful manner in which the gladiators died in public, not only familiarized the Romans with death, but rendered the thought of it rather agreeable than otherwise.

The principal CAUSES which produce *Suicide in England*, according to our author, are the refined subtilties of certain religious sects, the frequency of public disturbances, the unrestrained indulgence of the social passions, the risks run in the speculations of foreign trade, the idleness of wealth ; to a certain extent drunkenness, and above all that idol of the English, public opinion. The same causes in some degree influence the French ; but in addition we may mention, the derangement of plans, the annihilation of hope, and a life of indolence succeeding to one of the most assiduous energy. There are other causes, but these are the most powerful. Dr. Burrows has attempted to prove that suicide is more frequent in France than in England ; but his own arguments lead to the conclusion that England is the native land of self-murder. So far, however, from being reproached for this, that country is only the more an object of pity.

Ennui, or spleen, is not the malady of the labourer or the artisan, but of the refined and luxurious ; although it is found even in the artist, if he applies himself to an art which is contrary to his choice or the bent of his genius. If the objects round us are disagreeable, or even though every way delightful, if they fail to interest our senses, ennui, spleen, or weariness of life, is intermingled with all our actions, and the consequence too often is suicide. The lover, though surrounded by the most delightful landscape, though in the midst of society, at once agreeable and refined, if at the same time deprived of the tender object of his love, pines away and languishes, and is the prey of spleen. So it is also with the ambitious man, when stopt short in his career. In the spring of life, too, the young man and the young female often feel its fatal influence ; and when life is spent without variety, or in one dull round of insipid pleasure, spleen becomes very powerful. If the mind, that in a foreign country still hopes to revisit the scenes of its earliest pastimes, and of all its fond remembrances, be deprived of that hope, it languishes and withers like a flower that has been transplanted into a strange soil. Numerous indeed are the victims of spleen, but none in general are more so than the rich and powerful, the object of the poor man's envy, who little knows what a wide abyss there often is between possession and enjoyment.

The *delirium* of *suicide*, like melancholy, of which it is often but the last step, when generally considered, appears in two principal but opposite forms : the one is characterized by the most profound melancholy, by fearful apprehension of impending mischief, and by a particular fondness for solitude ; the other by much corporeal and mental excitement. The last generally follows the destruction of some favourite passion ; and the suicide is so instantaneous, that the physician is called in only to witness its consequences. At other times the progress of the delirium is slower ; and an attentive spectator may mark its features and arrest its progress. The expression of the countenance is then extremely changeable, and seems even as it were in some degree convulsed. The face is for the most part flushed, the white of the eye is bloodshot, and there is a strong pulsation in the temporal and carotid arteries. The head-ache, which almost always afflicts such patients is more or less severe, and its seat varies ; but it is generally there that the most pain is felt. The patient almost never sleeps ; and this symptom sometimes precedes all others. The feelings are sometimes almost entirely blunted, at other times they are preternaturally acute. Such patients at one time complain of an icy coldness all over them, and at another they think themselves on fire.

Some of them have declared that they were impelled to suicide by inexpressible anguish, and others by a feeling of unutterable happiness. There are some slight ailments in the breast and bowels; the action of the stomach is in some respect impeded; there is more heat than usual at the hypochondria, or sides of the epigastric region, which at times are painful and hard to the touch; but with all this, those physicians are certainly wrong who look upon the liver and spleen as the chief source of cerebral disorder.

The PROGNOSIS is more favourable in that kind of suicidal delirium attended with excitement, than in the melancholic, and if the inclination to suicide does not degenerate into madness, it will generally cease with the cause that produced it; but after it has ceased, sometimes very slight causes will renew it. It is thought that the suicide goes to death with great coolness; so it may seem to a superficial observer; but with care it is by no means difficult to discover his internal agitation. Is suicide an act of courage? Both brave men and cowards have committed it; therefore, it has been the effect of delirium in both. Suicide, characterized by profound grief, is oftener the last step of melancholy than a primitive affection. The persons affected with it are silent, gloomy, cowardly, suspicious, and meddle with the objects round them only to torment themselves. The attempts made to amuse them irritate their minds; they think we are making game of them, that they are despised, and they see a mystery in every little circumstance that occurs. In this way 'trifles light as air,' give rise to the most unreasonable suspicions. The future appears to them under the most frightful aspects; they have a gloomy and repulsive look; despair is depicted in every feature; their countenance is motionless, tawny, and cadaverous; their eyes are hollow, inanimate, and either of their natural colour, or very much bloodshot. They have head-aches more or less severe, for the most part confined to the brow, and particularly at the root of the nose. There is a strong pulsation felt in the inside of the head; their days and nights are passed without sleep; or if they sleep, they are troubled with dreams and fantastical apparitions. The breathing is interrupted by frequent yawning, the arms seem to be tossed convulsively, the skin is warm, in some parts as hot as fire, and in others as cold as ice. There is a distaste for food, or a want of appetite, or they obstinately refuse every kind of nourishment. The bowels are in a very irregular state, or they are in general constipated. In this painful state, they reflect on some plan of suicide. They not unfrequently keep a journal, in which are narrated their various feelings, and the kinds of

death which they have alternately chosen and rejected, with their reasons for doing so, which are often abundantly ridiculous. They make their will, and at the same time do all they can to conceal their despair and their delirium. Frequently they accuse themselves of madness, and lament the misfortunes which overpower them ; while others argue with great strength of reasoning in favour of their prejudices. Morality and religion seem to startle others in the midst of their career, and a severe struggle ensues, which is generally terminated in favour of suicide. I knew a woman, says M. Falret, who was convinced that her ideas of suicide were contrary to her principles of religion ; yet she destroyed herself, in the persuasion that every general rule has its exceptions, and that hers was exactly a case in point. Some murder themselves to get rid of the horrid thoughts of suicide ; while others brood over them, like J. J. Rousseau, for months and for years, and at length perpetrate the very action which they dread. The kind of death which they choose seems to be indifferent to them, but generally the one that is quickest and least painful is preferred ; but some are obstinately bent on one kind of death, and whatever opportunities they may have will take no other. Some men, for example, have a natural horror at blood, and however determined on self-destruction, would on no account use a cutting instrument for that purpose. When once determined, they are cunning enough to deceive the strictest superintendence, and choose their time with such infinite address, that we cannot be too much on our guard against it. Some persons, altogether ignorant of the nature of mental alienation, and not knowing that the melancholy man is at all times capable of reasoning on the subject of his own delirium, have thought very erroneously that this address was a proof of a sound mind. Their contrivances for this purpose are sometimes wonderful. In general they seek a retired spot to execute their purpose, though at times it has been done in the most public manner ; thus a disappointed lover has killed himself in front of his mistress' house, on the very day of her marriage. When the melancholy man has fairly determined on suicide, nearly the same symptoms are observable, as in suicide attended with high excitement, which in our author's opinion, proves that in both cases there is a similar alteration in the brain, and that, between the two kinds of delirium, there are merely shades of difference. It is rare that this kind of melancholy is constant : it often remits, and at times it even assumes the intermittent type. The paroxysm is almost always brought on by relaxation, or by some moral cause ; and, in women, attempts of this nature are more frequent some days before and

during the flow of the menses than at other times. But certain symptoms may be observed for some days previous to the attack, and these should be carefully noticed, that proper measures may be taken to prevent its coming on. For instance, the usual symptoms of the malady are all aggravated; they are quarrelsome, discontented, and fond of being alone. They complain of head ache, they get no sleep, and they refuse food. They are lazy and regardless of every thing round them, and there is something sinister and characteristic in their look; which is immediately known by an experienced eye to be a precursor of the attack.

Instances of *MUTUAL SUICIDE*, when two individuals, generally lovers, fall by each other's hand, are not uncommon. It was known in ancient as well as in modern times, and unhappily it is now-a-days but too frequent, probably in consequence of certain novel writers having patronized, or at least painted it, in too brilliant colours.

Those who have committed suicide, have, generally, for a longer or shorter time, exhibited undoubted marks of melancholy; and the suicide is at last commonly the effect of some storm of passion. Here, however, as in other kinds of melancholy, the patient associates certain erroneous ideas in his mind, and at length, believing them to be true, draws very rational conclusions from them. Yet his fits of irresolution and determination, his struggles betwixt cowardice and courage, betwixt his contempt of life and his natural fear of death before perpetrating his purpose, are all but too strong evidence of a diseased brain. But with all this, says the author, I do not call that death suicide, which is the result of certain delirious ideas in monomaniacs, and altogether independent of the will. For instance; a person of studious habits imagines he has received a commission from the Almighty to convert the human race; but after using threats and entreaties to effect his purpose, and finding them of no avail, he determines to make a striking impression on a sinful world, and throws himself from a high bridge into a river and is drowned. This is not suicide; it is the action of a madman, who thinks himself invulnerable, and who wishes to give a striking proof of his mission. The author gives other instances of the same kind. But monomaniacs often destroy themselves with a complete consciousness of the action; particularly those affected with love, madness, or with the feelings dependant on religious austerities; for in no other kinds of monomania are patients so much disposed to injure themselves or others. But in other cases, as in true suicidal melancholy, the patients fall a sacrifice to the impatience with which they bear

intellectual or corporeal pain; for at such a time they look on death with pleasure, as the termination of their sufferings. It is said that Springer, the inquisitor, sometimes met with women so possessed with demons that they were sick of life, and he had them condemned to death merely to oblige them, and burnt them alive out of charity. Indeed nothing can equal the torments which these unfortunate people, the fancied demoniacs feel; the very sight of them is painful.

The inclination to suicide is not complicated with melancholy only; it occurs also in combination with mania, hypochondriasis, and the dementia of Pinel. The maniac is so often in a state of mischievous activity that he may voluntarily turn his fury against himself; and his inclination to suicide may shew itself at the commencement of his malady, during its continuance, or at the moment of convalescence. It is for the most part at the approach of periodical mania that the patient destroys himself. He may then feel, perhaps, the destruction of his reason inevitable, and may prefer a natural to an intellectual death. During convalescence, the remembrance of the state in which he has been, and the fear of relapsing again into it, may stimulate him to commit suicide. The motives that may determine to it, during the continuance of madness, are infinitely varied; but the inclination generally depends upon certain hallucinations of sight and hearing. One idea, or a train of ideas, may become the cause of suicide, and the madman pursues his design with all the perseverance of melancholy, till a stronger impression or a preponderant idea turns him from it; and this ought to be carefully attended to by those who have the care of madmen. In the maniac, the idea of suicide and murder are often connected. Suicide has also been committed in the delirium of fever.

With regard to the hypochondriac, there is less risk of his committing suicide; he is fonder of talking about the thing than really doing it; but at length, the idea of his being incurable becomes more painful than that of death, and he falls a victim to his feelings. 'Who will deliver me from my distress?' says the philosopher Antisthenes. 'That will,' says Diogenes, presenting him with a dagger. 'But I do not want,' says Antisthenes, 'to get rid of life, I wish only to be freed from pain.' An hypochondriac once came voluntarily to the resolution of throwing himself headlong from a window, because in his attempts to be a believer in religion he never could get beyond doubting. We have never observed the inclination to suicide in the dementia of Pinel, unless it has been the consequence of several fits of melancholy, and when life has been painful to the patient.

What ideas can impel those unhappy persons, whose only object is to get rid of life, to transfer the effects of their despair from themselves to entire strangers, or even to those for whom they have the most affection? The knowledge of this would be a matter of great importance to the practitioner, and would guide him in forming his opinions as to the duration of the patient's confinement, or as to the risk of allowing his relations or friends to visit him. In many cases, the murder is caused by an erroneous judgment as to the nature of crimes. Some melancholy persons are afraid of enraging the deity by a voluntary death, and therefore render themselves amenable to the laws, by murdering some other person, thinking they will have time to repent, and that God will pardon them; others destroy the individuals whom they love, to prevent them from sharing those misfortunes, by which they fancy themselves overwhelmed; some under the influence of love and jealousy commit suicide, or give themselves up to justice, after having imbrued their hands in the blood of a beloved object. In support of these positions, M. Falret has narrated some curious cases, but to enumerate them would far exceed our limits; it is wonderful, he observes, what strange shapes delirium may assume, in the same individual.

Epidemic suicide actually appears to have happened in different places, especially in times of great public distress; and when the constitution of the air has been very hot and moist. In 1806, sixty suicides occurred at Rouen, during the heats of June and July; and at Copenhagen, in the same year, more than 300. In 1793, about 1,300 occurred in Versailles alone.

The PROGNOSIS in this disease is always unfavourable; but it is less so, if the disease is not complicated, if it is recent, if it depend on slight moral causes, and if it is no way connected with an improper education. In general, the tendency to suicide may be obviated without difficulty, if it is connected with the commencement of madness or melancholy; and particularly, if the patients at such times have a wish to starve themselves; a derivation to the stomach and intestines being then often procured, if an emetic or suitable purgative be administered; when the attempt at suicide has often been made without success, the patient is sometimes cured radically, or the inclination to it subsides for a long time, or it has terminated after a sudden burst of passion. Suicidal delirium may also end favourably by means of certain evacuations or critical diseases; and there are instances of persons who had lost all remembrance of suicide, when restored to life after being suffocated; it may likewise terminate in mania, or in natural death happening either suddenly, or

after chronic diseases more or less tedious. In the spleen, and in nostalgia, the cerebral disorder ends sometimes in a general consumption.

The appearances on DISSECTION are nearly the same as in other maniacal affections ; namely, diseased appearances in almost every organ, and even sometimes in a single organ ; yet the liver is seldom injured, and those physicians who think otherwise, may do mischief by following a wrong plan of cure ; nor are gall-stones found oftener in the gall-bladder in this, than in other species of melancholy. Heister, in one patient, found the pancreas hard and scirrhus, and in another it was enlarged in size and filled with black blood ; he noticed also some alteration in the bile, and in the gall-bladder, and its excretory duct. M. Esquirol was the first who observed the displacement of the transverse colon, which becomes oblique and even perpendicular, and it has also been noticed several times by others. Osiander makes mention of chronic inflammation of the intestines. In a hysterical girl who had hanged herself, one of the ovaria seemed to have been burst by a fluid contained in it. Diseased appearances of the heart are also often met with. In general, our author found that sufficient attention has not been paid to the diseased appearances of the coverings of the brain in mental diseases ; yet in many instances these show traces of more or less severe irritation, and he thinks that these are more frequent, or at least more easily observed in the pia mater, than in either the dura mater or the arachnoid coat. Cabanis has found more phosphoric matter in the brain of madmen and suicides, than in that of other men. In a melancholic patient who died of hunger, M. Esquirol found the brain hard and of a violet colour, as if it had been injected with violet-coloured wax. Softness of the corpus callosum is not generally established ; the opposite state having been oftener observed by M. Falret and Lobstein. In Hufeland's Journal (1812,) we have an account of a suicide in whose brain a cyst was found above the right ventricle, in which was a bone an inch long and three lines thick. M. Fretau has attributed suicide, in two cases which he observed, to a thick and very glutinous blood stagnating in the head. But in many patients, accurate observers, such as Esquirol and Joseph Frank, could find no change cognizable by the senses ; and this is almost always the case in individuals who kill themselves, before the malady has taken deep root.

In entering upon the consideration of the SEAT of suicidal melancholy, he does not agree with those physicians who assign different seats to madness and melancholy ; nor does he think that the innumerable divisions which have been made of those

maladies are of any real importance in practice. It may be affirmed too, that the varieties of delirium do not depend on different modifications of the brain, but ought to be attributed to the difference of manners and customs, and to the prevailing ideas of some particular age or country, or to the influence of education, habits, creeds, &c. Awenbrugger, Leroy, Noest, Fodere, and Esquirol, all assign the abdomen, and more particularly the liver and spleen, as the seat of suicidal melancholy. M. Falret, on the contrary, thinks that suicide may be as often said to depend on cutaneous as on abdominal disease; that it can have no other seat than the organs of the intellectual and moral faculties; that it very rarely happens that disorders of other organs are its remote cause; and that consequently the encephalon or brain, *almost always primitively affected in this disease*, is the source of every kind of mental aberration. We certainly cannot agree to this, nor any other of those exclusive causes assigned for diseases. Why may not all these causes act in different cases and under different circumstances?

If the hereditary predisposition to suicide depends on the powerful agency of the feelings peculiarly modified, it must be more natural, he thinks, to seek for the seat of such modified feelings in the organ of sensation, and of the intellectual and moral faculties than in the instruments of the nutritive functions, the liver, spleen, intestines, &c. Every day's observation, indeed, may prove the existence of such peculiarity of feeling; for do we not see that what affects one person in the strongest manner, makes little or no impression on others, although, apparently, it be a matter of equal indifference to every one of them? The other predispositions most worthy of notice are the nervous and melancholic temperaments, education, and the age of manhood. What are the principal characteristics of these temperaments? Sensibility, exalted to the highest pitch, and a fondness for the most refined sensual emotions, and, in certain cases, a particular tendency of the mind to seek after tranquillity and solitude, and to see every object in the darkest light? Do not these phenomena depend essentially on the brain? Indeed, in all persons of the nervous, melancholic temperament, the brain is in almost constant exercise; and the life of an animal which has no brain is almost that of a vegetable: of the predisposition arising from education we need not speak. But how does the age of manhood predispose to suicide? Man, it may be answered, at that time begins to feel anxiety and care, his most dangerous passions are coming into action, and his mind, or rather his brain, is exposed to the most toilsome efforts.

Causes purely physical have, therefore, but little effect in pro-

ducing suicide, and even when it has appeared to be caused by physical pain, we may almost always, he thinks, trace it primitively to some moral cause ; and when it is considered, that wherever suicide has been very generally prevalent, it seems always to have been connected with causes affecting the mind or brain, it will appear, he thinks, how inadequate disorders in the abdomen are to produce intellectual derangement. M. Falret then gives ten cases, brought forward by MM. Leroy and Fodere, in proof of the abdomen being the seat of suicidal melancholy : but in nine of them the propensity to suicide can be clearly traced to intellectual or moral causes ; and in the tenth the cause is not mentioned ; so that our author's cases and those of his antagonists resemble one another most exactly as to causes. But if the first symptoms taken notice of are cerebral, if they are never absent, and are the only ones any way severe, there can be no doubt as to the seat of the disease ; and therefore, the primitive disorder of the brain should be regarded as the cause of those phenomena exhibited by organs more or less remote from it.—M. Falret's analysis of those cases is undoubtedly favourable to his own opinion ; and the abstract of twenty cases, which he subjoins, seems strongly to confirm it. In all of them the suicidal melancholy was subsequent to direct cerebral causes ; in eleven the seat of the disorder was exclusively in the brain ; and in the other nine the symptoms of disorder in other organs were always evidently subsequent to the affection of the brain, sometimes by several years, and even independently of the propensity to suicide. His opinion, he thinks, still further confirmed by this circumstance, that the secondary phenomena, in wounds of the head, in inflammation of the arachnoid covering of the brain, and in apoplexy and hydrocephalus, have a striking analogy to those observable in the disease which leads to suicide.

The brain, from the earliest times, was thought to be the seat of intellect, and many things confirm this idea ; particularly the delirium, and altered state of the functions of the senses, which accompany different organic modifications of the brain. Others think that the soul is the primitive seat of madness. Even physicians, who allow that the brain is the organ of thought, have not set a just value on the symptoms of mental alienation, and have not drawn legitimate consequences from the appearances on dissections ; thinking that the remarkable changes which take place are rather the effect than the cause of madness, and that the brain is only secondarily affected. Dissections of morbid bodies are undoubtedly useful, but they would be much more so, could we, from appearances, tell the symptoms that had been present in the living body. This may be done in a few cases,

but in most of them it is extremely difficult, and must be much more so in an organ whose texture and mode of action are but little known ; and this remark is peculiarly applicable to the brain and nervous system. The parts may be in a morbid state, although that state is not apparent to our senses. Physicians therefore should not draw such strong conclusions, as they commonly do, from the non-appearance of morbid changes.

The changes observed in the thorax and abdomen of MANIACS are the same as are often seen in maladies very different from madness ; and why should it not be so ? Madmen are as much exposed to thoracic and abdominal complaints as other men.— But why not allow that a diseased brain may occasion disorder in the thoracic and abdominal viscera, as readily as phthisis produces morbid alterations in the intestines ? If, on the one hand, we attribute many of the morbid changes observed in other viscera than the brain to a primitive affection, on the other hand we may assign a number of them to situation, seasons, mode of living, treatment, &c. In general, when the progress of madness has been very rapid, we observe no change in the brain, nor indeed in any other organ, nor in madmen who commit suicide, before the malady has taken deep root.

When we can tell, says M. Falret, what constitutes the difference betwixt the brain of a peasant, whose ideas extend little further than his waggon, his flock or his hut, and that of a Pascal, a Bacon, a Newton, or a Descartes, where so many fine images were arranged with such consummate art, we may arrive perhaps at the proximate cause of madness. It cannot be exactly known from an inspection of the brain of madmen, but we may presume that it has some connexion with what is observed there : —1st, because organic læsions are much more frequent in their brains, than in that of other patients ; 2d, because in the numerous cases where no læsion can be detected in any organ sufficient to account for the maniacal symptoms, we have a right to suppose the cause to be in that organ whose texture and mode of action are least known ; 3d, because our opinion is confirmed by analogy ; for pathologists admit diseases of the nerves, where functions are disordered, but where there is no visible organic change ; and of this we have a striking example in amaurosis ; 4th, because the diseases which madmen die of are in general intimately connected with the nervous system, one half of them at least dying of palsy. And besides, symptoms often give us a far more exact knowledge of the nature of certain maladies than can be obtained by the most rigorous inspection of the injured part ; of this syphilis and scrofula are examples. The plague, the itch, scarlatina, and small-pox depend on specific causes es-

essentially different, yet they all leave the same impression on the dead body, namely, traces of inflammation ; and it is only by their symptoms that we distinguish them.

MM. Noest, Leroy, and Awenbrugger, who fix the seat of this disorder in the abdomen, of course give all their attention to the state of the abdominal organs. Leroy endeavours by the use of deobstruents to make the fluids circulate freely in the liver and spleen, in order to remove atony from the vessels and excite them to healthy action. The principal means used by Awenbrugger in the cure of suicide was cold water, which has again been introduced into practice for some years past by Leroy, whose plan of treatment consists,—1st, in putting the patient in confinement, when it is dangerous to leave him at liberty ; 2d, in making him drink a pint of cold water every hour, and if he still continue thoughtful and silent, in wetting his forehead, temples, and eyes with cold water, till he become livelier and more communicative ; and 3d, in putting a blister on that side (*hypochondre*) where there is most heat. And as the feet are apt to become cold during the application of the cold water, they are wrapt in warm flannel. Awenbrugger's method in some cases has been successful ; but only, M. Falret apprehends, when the patient has already been in a fair way of recovery. The obstinacy of patients in this disorder is so great, that it would be impossible, during its continuance, to make them drink such a quantity of water ; and when they do consent to take it, we may rest assured, that any other means would cure them. The above plan acts merely by derivation and revulsion. We have seen a melancholic patient, who had a tendency to commit homicide and suicide, drink readily a pint of water every hour for three weeks without the smallest benefit. In another case similarly treated for three months, with the addition of a seton in the right hypochondria, no advantage was gained from the treatment ; there was merely some disorder in the stomach and bowels for the first eight days. Any benefit that was obtained in M. Leroy's cases, seems to have been from the confinement, and the very frequent application to the head of cloths dipt in cold water, in which sal-ammoniac had been dissolved. Besides, in cases where Awenbrugger's plan had been adopted, apparently with success, blood-letting and purging had been previously employed. But M. Leroy himself says it is absolutely necessary afterwards to use moral remedies.

In all diseases we attempt a cure in two ways ; we either act upon remote parts which are connected with the real seat of the disease by sympathy, and this is the mode by revulsion ; or we act directly on the part itself where the disease is seated ;

and in mental alienation this forms the moral and intellectual treatment of authors.

As in every species of mental alienation EXERCISE is serviceable, so is it in this ; manual labour in the fields for the poorer sort of patients ; billiards, tennis, &c., and journeys in the country, and over rough roads, on foot, on horseback, or in a carriage, for the rich and luxurious. These all withdraw the attention of the patient from the malady, and render more regular the functions of the abdominal viscera which are sympathetically affected. But exercise is not sufficient, if we do not use the most appropriate internal medicines, and employ judiciously the usual moral remedies. Travelling is a powerful means of recovery ; and the more inconveniences the patient meets with, so much the better, as it thus substitutes real discomfort in the room of imaginary distresses, and agreeably withdraws the mind from self, to the examination of the varied beauties of external nature. But a sea voyage is less desirable from its sameness, and on account of its almost constant attendant sea-sickness, which often actually produces a regardlessness of life.

The REMEDIES which we make use of, should be somewhat varied, according as the patient is in a state of strong excitement (*exaltation*,) or in one of extreme depression (*concentration*;) however, if the disease is but beginning, probably the same treatment will suit both. Both topical and general blood-letting should be employed to such an extent as may be warranted by the symptoms. The warm-bath, continued for several hours at once, is often of great service ; and at the same time it is useful to wrap linen cloths wet with cold water, round the head, or to have a wet sponge applied to it, during the continuance of the bath. These remedies should be assisted by the internal use of cooling beverages, gentle sedatives, and sometimes even of mild purgatives. In the second period of the disease, it is proper to employ strong or even drastic purgations, not only as derivatives and evacuants, but so as to occasion serious uneasiness, and make the patient anxious about his health ; for to gain this last point is one step towards recovery. As we are convinced that no particular purgative is a specific in this disease, we should always employ that which is most efficacious and least dangerous. Emetics are not only useful in the course of the disease, but they are exceedingly useful in preventing a relapse. If an emetic in an ordinary dose does not produce vomiting, instead of augmenting the dose, it may be better, in the opinion of M. Amard, of Lyons, to give a small dose of opium, some hours before the emetic. Blisters, setons, or cupping, may be of use as derivatives, and they may be ap-

plied in preference, to the sides, on account of the intimate connexion, which these parts have with the head—the organ primitively affected. But, when we wish only to occupy the attention of the patient, it is better to put them on the legs, that, in combination with exercise, they may produce a pretty smart pain. M. Falret thinks that these external stimulants, in general, have a good effect. Antispasmodics and narcotics are seldom useful in diseases of the mind : but in the hands of a practitioner, who knows how to use them, they may be of great service ; during excitement, and in the time of a paroxysm, he has always found opium hurtful ; and he thinks it should hardly ever be used till the irritation of the head is gone, and the patient is in a state of convalescence ; at this time tonics are sometimes indicated ; and when the disease is intermittent, cinchona has been employed with a happy effect : such are the indirect means of recovery. But what treatment can we employ in the spleen, or how restore enjoyment to the man who has quite exhausted it ? Here the advice which Fenelon gives to Dionysius the tyrant, by the mouth of Diogenes, will naturally apply. “To restore his appetite, he must be made to feel hunger ; and to make his splendid palace tolerable to him, he must be put into my tub, which is at present empty.”

It seems to be indispensably necessary, that the patient should be separated from his friends and relations, but he ought not to be kept in a private apartment, but rather in a common ward ; the ward ought to be on the ground floor. The physician should appear to him in a prepossessing light, and should seem to take a tender and an eager interest in his welfare. To gain a patient's confidence, his foibles should almost never be attacked rudely : if reason comes to him with a frowning look, he is proof against it ; and he will not regard that man with affection, who has no pity for his failings. We must try to fix the attention of our patients upon those objects that are most dear to them, and at first present nothing to them but images of joy, and new means of happiness. Let every one near them behave with affectionate regard and polite attention ; let every body endeavour to tend the person ; to soothe the mind ; and it is in this way that we gain the confidence of the melancholic, and give them courage to endure life. The most favourable moment for making an impression on them is when they enter into the asylum. There they receive with pleasure the consolation that is offered to them. In general, it is better not to reason much with them at first ; long conversations are more likely to bewilder than to cure them. It is better to say something that may rouse to reflection, and then leave them abruptly. The physician must

adapt his means to the genius of individuals, and must study them for that purpose. But at all times he may tell them agreeable news; he may satisfy the hopes he has excited. He may also sometimes flatter them, for by flattery he will give them an impulse which is necessary for their recovery, which they imagine to be the consequence of their own exertions. He may also exaggerate the happiness that awaits them on leaving the Asylum. Pleasing illusions are the balm of moral pain; and should we not be lavish of them, when it is the only means of making life supportable? But let us show astonishment at their extravagances, that, if possible, they may be ashamed of them. Passions opposite to that which has excited the disorder may be reckoned among the means of cure; and a sudden and unexpected emotion has sometimes been productive of the happiest effects.

If there are deranged persons to whom you are unable to give a favourable impulse, make them live in company with others, and point out models for their imitation; one melancholic patient, perhaps, will not take food in his own apartment; but, led away by the sympathy of example, he will take it almost of his own accord, if he see other patients eating, and if some one invites him to follow their example. It is often of consequence, although at the same time they should be strictly watched, to seem to trust them, especially if they have pledged their honour not to attempt suicide. Sometimes we find it very difficult to give a favourable answer to their demands, there is so much danger of a bad use being made of any liberty that may be allowed to them. No one, therefore, but a practitioner who has been much accustomed to attend madmen can decide in a case of this nature. But we cannot be too careful, and ought at all times to be on our guard with such patients, notwithstanding their promises and tranquillity; for these unfortunate people try to lull us into a state of security, that they may find a favourable moment to terminate their existence. When a melancholy patient refuses food, it would be wrong to suspect him of intending suicide, as we might thus run the risk of putting the idea of it in his head. They obstinately refuse food, particularly at the commencement of the disease; and, as it often depends upon a disordered stomach, it is then useless to oppose the patient; and, even if it happens at a more advanced period, it is only for a short time; in both cases it is of little moment, seldom lasting more than two or three days. An emetic is sometimes useful; some will not eat from a principle of religion and honour, or from the fear of being poisoned, &c. But if this refusal continues beyond a reasonable time, we must overcome it

by force, but not till we have employed every kind of friendly remonstrance, and been convinced of its inutility. We should recollect that sometimes little trifles will suddenly and unexpectedly excite the desire of food.

The melancholic seem, in general, to bear the sight of mournful objects better than joyful ones, and upon the whole to derive more advantage from them: many being unhappy themselves, because they have never thought of the misery of others. The exercise of the intellectual faculties may be attended with the best effects; and a perusal of the masterpieces of the human mind may be a source of never-failing delight. The subject of moral remedies is inexhaustible; and moral medicine is bounded only by the genius of him who exercises it. One must have lived with deranged persons to have an adequate idea of the care and attention which they require; for if their temperament is not perfectly known to us, we can hardly utter a single word without the hazard of injuring them; and therefore all our conversation must be in harmony with the age, sex, education, character, and habits of the patient to whom it is addressed. Mildness ought to form a principal part of all the regulations in a lunatic asylum; but it is necessary to punish sometimes; yet we forbid blows and chains, being convinced that they deprive man of every feeling of his own dignity, that they inspire him with a thirst for vengeance, and render him incurable. We do not think it necessary to follow M. Falret in his enumeration of the various modes of punishment or repression, as the subject is not new: we shall only say with him that they should be used as seldom as possible, and that the rotatory machine of Darwin should never be used without the presence of a physician. Punishment should always be proportioned to the character and situation of the patient; and the physician or attendant ought never to allow his temper to be for a moment ruffled, when he is obliged to rebuke or punish a patient, who should be made to comprehend, if possible, that the punishment is directed against his fault and not his person.

When the patient has recovered, he ought to be kept away from all those objects that occasioned his delirium, or are capable of exciting it; thus the sight of a river, of fire-arms, or of a prison, have recalled the idea of suicide, even years after it had ceased. Our attentions to the patient should be redoubled at certain seasons of the year, at the periods of the menstrual discharge, and during and after the time of delivery.

After an able examination of the LAWS AGAINST SUICIDE, our author gives it as his opinion that they are altogether useless, if they have not been the means of rendering it less frequent. It

is not to be supposed that he who has become regardless of the tender ties of domestic love will pass a thought on the ignominy that may await his dead body or his memory. It is therefore to medicine, in unison with philosophy that we must look for the prevention of suicide. Speaking of preservative means in particular circumstances, the author gives the following anecdote of Bonaparte:—In one of the regiments of the line, two suicides having been committed in one week, the first Consul stopped the contagion by issuing the following general order: "A soldier should be able to subdue his passions, as the man who suffers mental pain without shrinking, shows as much real courage as he who stands firm under the fire of a battery; for, to become the prey of melancholy, or to commit suicide to escape from it, is like flying from the field of battle, before the contest is decided."

TO PREVENT SUICIDE, a man should avoid marrying into a family in which suicide has been committed; and a mother in such circumstances should not hesitate for a moment to employ a nurse for her children; and the more particularly, as madness has been found to descend far oftener from the wife than from her husband. When children are so disposed, habitual exercise should be long employed in their education; they should never be for a moment idle; and they should be accustomed from earliest infancy to subdue their passions. If we allow them to lead an effeminate life, and gratify them in every thing, we shall infallibly increase the tendency to suicide. In short, education should be founded on pure morality, and on mild and enlightened religious principles. The author finishes the third part of his work, with two beautiful extracts from B. de St. Pierre, and Jean Jacques Rosseau, on the utility of man's believing in a Deity and in the immortality of his own soul.

Our analysis has already extended to so great a length, that we could not now enter on the consideration of the fourth part, a collection of cases in proof of the author's doctrines, even if it were susceptible of analysis. These cases, however, all tend to shew that the head is the seat of the disorder.

MONTHLY SUMMARY OF PRACTICAL MEDICINE.

I. ANATOMY AND PHYSIOLOGY.

MR. BROUGHTON'S *Experiments on the Nerves.*

A series of well conducted experiments on horses and other animals, several of them performed in the presence of Messrs. Brodie, Field, Cutler, &c., have led Mr. Broughton to some very interesting conclusions respecting the functions of the nerves. 1. The fifth pair of nerves is highly sensible, and bestows sensibility to the integuments of the face and lips generally; and when divided, all sensibility ceases in the parts below the division to which this nerve distributes branches. 2. The portio dura of the seventh nerve is entirely devoid of sensibility, and conveys none to the parts supplied with its branches. It influences the muscles of the face, the cartilages of the nostrils, and the actions of the lips; for when it is divided all those parts become paralysed, though sensibility remains entire. 3. The par-vagus is entirely insensible. If strongly compressed or divided on one side, the wheezing produced indicates oppression in breathing; when on both, this increases and proves fatal. 4. These experiments, so far as they go, prove the nerves to have separate properties, and that these are in accordance with the different individual functions belonging to those organs to which their branches are distributed. The experiments incontestably proved the questioned point as to the sensibility of the eighth pair, and par-vagus.—*Med. and Phys. Journal.*

MR. C. BELL on the *Motions of the Eye.*

In a paper lately communicated to the Royal Society, Mr. Bell undertakes to shew that there are certain motions of the eye which have hitherto been overlooked and undescribed. Thus, every time the eyelids are brought together to cover the globe, the eye turns upwards, without which motion it would not be properly moistened, nor the particles of dust removed from its service. During sleep the ball, he says, is turned upwards, so as to lodge under the superior palpebra. These

movements are rapid and involuntary, while others are under the government of the will, and for the purpose of directing the eye to different objects. Hitherto both the oblique and the straight muscles have been regarded as voluntary; but Mr. Bell maintains that the oblique are for the performance of the insensible motions, and the recti for those under the command of volition. We therefore judge of distance and relative position by the consciousness which we have of the action of the recti; and as the functions of these muscles are inseparably connected with the retina, they cease to act when it becomes insensible, while the oblique muscles come into play, and draw the pupil upwards beneath the upper eyelid. Hence that turning of the eye-ball which we witness in sleep, in fainting, or in death, is but the indication of insensibility.—*Foreign Journal.*

II. SURGERY AND MIDWIFERY.

Case of Laceration in the Fibres of the Gastrocnemius Muscle, treated without Rest or Confinement. By E. BARLOW, M. D. Bath.

Notwithstanding the signal improvements of modern surgery, there are yet particular cases in which the general practice might, perhaps, be modified with advantage. This appears to arise from such cases not occurring to any practitioner with sufficient frequency to afford adequate opportunity for investigating their real nature, or devising the most judicious and effectual treatment. An instance of this kind has lately occurred in my own person; and as I was thus enabled to observe its progress minutely, a brief report of the case may not be uninteresting.

A few months ago, while crossing a street at night-time, I incautiously struck my foot against an elevated flagway. The force of collision was great, and I instantly fell, experiencing the most excruciating pain in the calf of the leg. Swelling of the limb ensued almost immediately, and, ere I reached my own house, the swelling was considerable. Simple treatment was employed for that night; and next morning, having no doubt that a rupture of fibres had taken place in the fleshy belly of the gastrocnemius muscles, being of a full habit, and satisfied that the first object was to prevent inflammation, by reducing plethora and lessening arterial action, I lost twenty-four ounces of blood from the arm, and took a saline purgative. By this means inflammation was obviated, and the progress of serious effusion in the limb arrested. Immersing the leg night and

morning in warm water, I found the most soothing local treatment; and on these occasions, gentle friction, facilitated by the use of soap, was grateful. Sensible support was experienced, by bandaging the leg from the foot to the knee every morning with a calico roller, which was removed at night.

In a few days I had recourse to an embrocation composed of soap liniment, camphorated spirit, and spirit of ammonia, which was employed with increased diligence on the sanguineous extravasation becoming more manifest from the absorption of the serous effusion. The ecchymosis was considerable, and appeared first in the lower parts of the limb, to which the extravasated blood had speedily gravitated. I did not confine myself a single day, but pursued my ordinary avocations, by the aid, first of a wheel-chair, and afterwards of a walking stick.

Such was the course of treatment employed, the success of which will appear from the following results. In ten days I was enabled to dismiss my wheel-chair; in a fortnight I relinquished my walking-stick; within three weeks even the bandage was laid aside; and, in a day or two more, I could walk without halting, and descend stairs as before the accident, this latter power being that to which I was latest restored. Although recovery was thus speedy, yet, judging from the intensity of pain, from the rapid swelling and great enlargement of the limb, and from the extensive ecchymosis, I can have no hesitation in pronouncing the accident to have been very severe. The *rational* of the treatment is so obvious as scarcely to need a comment. By the full blood-letting promptly employed, inflammation was prevented, and serous effusion arrested. Warm bathing allayed pain, and, by the gentle stimulus of moderate heat, excited the absorbents to a more speedy removal of effused serum than would have otherwise taken place. Bandages gave support to the injured muscle; and, by restraining its action while under exertion, saved me from much suffering, and contributed, I have no doubt, to more speedy recovery. Their discontinuance at night was as grateful to my sensations as their application by day. The frictions and embrocations were clearly instrumental in promoting the absorption both of the effused serum and extravasated blood. Such is the case to which I wish to direct attention, chiefly from its affording satisfactory evidence, that, in this species of accident, confinement and absolute rest are not indispensable. So far from it, I believe them to be actually injurious; and, in order to illustrate the subject in this respect, I shall here offer a few observations. A clear conception of the injury sustained appears to me to show manifestly that confinement and absolute rest are not necessary. By the

sudden force exerted, certain fibres in the fleshy belly of the muscle became lacerated. These fibres unquestionably contract when torn, leaving a chasm of some extent between the ruptured extremities. As these do not admit of being replaced in apposition, it seems clear that a direct reunion can never take place; and it is nearly certain, that such fibres become afterwards wasted, and gradually decline. If rest be enjoined, then, with a view to their reunion, the end, I have no doubt, is unattainable, and the practice unsupported by sound reasoning. But rest has been pronounced necessary, from an apprehension of the motion of the limb causing fresh laceration of fibres. This fear I believe to be utterly groundless; for, when I reflect on the force required to cause the original rupture, and the violence of concussion by which it is occasioned, I cannot imagine any hazard of fresh laceration from such gentle motion of the limb as a person suffering from this accident is capable of exerting. That such motion did me no injury, I was fully persuaded, from the fact, that, when under no necessity of moving, I frequently felt it a sensible relief to exercise the limb gently, by walking across my room. When such cases are treated by strict confinement, absolute rest, and continued bandaging, the result is far less favourable than what I experienced. By continued inaction, the parts become rigid and unfitted for motion, and recovery is generally slow. To contrast such progress with my more speedy restoration, may afford a useful lesson in practical surgery.—*Edinburgh Med. and Surg. Jour.*

DR. BULL'S Case of Cancer of the Lip.

Catherine Creedon, ætatis about sixty, applied at the South Infirmary for the cure of an ulcerated cancer of the lower lip. The disease commenced about two years ago, and now extended from one angle of the mouth to the other, and in depth nearly to the reflection of the mucous membrane from the gums to the lip, presenting a fungous-looking, ulcerated surface, much everted, so as nearly to reach the lower margin of the chin when the jaws were closed. The integuments of the chin beneath the tumour were of a dark red colour, which appearance, however, I was inclined to attribute to irritation from the acid discharge of the ulcer. On examination of the neighbouring glands, I could not discover any enlargement or hardness of them, as we generally find in ulcerated cancer of long standing. The

disease presented so hideous an appearance, that on first view of it I told the patient that I feared it was too late to attempt any thing in the way of operation ; but the poor woman begged so earnestly that something might be done, that I was induced to admit her to a bed in the hospital. Accordingly, on the 1st of May I performed the operation, in presence of my colleague Dr. Woodroffe, Mr. Hobart, Apothecary to the Institution, and several of the pupils, in the manner directed by M. Richerand, but instead of his flat scissors I used the scalpel, which I consider preferable for many reasons. I commenced it by an external incision through the integuments, and extending beneath the tumour from one angle of the mouth to the other, in form of a long crescent, as recommended. In the next incision the whole of the diseased parts were removed at one stroke of the knife, cutting so low as the frænum of the lip. The artery on each side was secured between the fore-finger and thumb of an assistant, until included in a ligature. In place of agaric, I applied lint to the wound, then a compress of the same, and over it a bandage. On removal of these the third day from the operation, I found that suppuration was fully established, and the surface disposed to healthy action. It has been dressed every day since with dry lint, and to-day (twelfth) is quite healed, not by granulation, but by a process which, indeed, I did not expect, viz. eversion of the mucous membrane and approximation of it to the skin, with *considerable elevation* also ; insomuch, that there is hardly any appearance of cicatrization, and a new lip is actually formed ; so that, when the jaws are closed, the upper lip and the new surface approach each other so nearly, that the loss of parts appears quite inconsiderable. Much of this appearance, however, must be attributed to that falling in of the jaw peculiar to persons advanced in life. For the first six days after the operation the patient could not retain the saliva, which flowed constantly over the wound, but she now possesses that power almost to its full extent.—*Lon. Med. Repos.*

III. PATHOLOGY AND THERAPEUTICS.

M. ANDRAL, Junior, *on the Pathology of the Digestive Canal.*

This assiduous inquirer has here presented us with a very elaborate paper, in which almost every inch of the digestive passages, from the mouth to the anus, is minutely examined both in health and disease. We cannot praise too highly the plan of

such monographs, though we ought to be on our guard in perusing them, as the spirit of system and of endless subdivisions, almost in all cases of this kind, stirs up the fancy and warps the judgment of the monographist. The French naturalists have, in this spirit, given many descriptions of plants and animals, which never existed; and we fear that the same folly has more than once been committed by medical men, in describing diseases and appearances which they had never seen, in order to fill up some gap in their systems and their monographs. With these remarks in our mind, we shall give a brief abstract of M. Andral's paper, and leave our readers to verify or reject his descriptions.

INFLAMMATIONS of the digestive canal are usually characterised by intestinal contraction, though such contraction may occur in the pyloric portion of the stomach, the cæcum, &c., where no inflammatory symptoms can be observed. The sub-peritoneal and cellular tissues also appear injected when viewed externally, but the injected state of the mucous tissue cannot be thus discovered; and in all dissections this should be attended to, as the seat of disease may otherwise escape observation. The internal surface of an inflamed intestine may be of all shades of colour, from bright *vermillion* to deep *brown*, indicating in the latter case the beginning of disorganization, and these coloured parts may be either uniformly diffused, or in patches or points, regular, irregular, or aborescent. Pimples, pustules, fungous excrescences, irruptions like small pox, &c., are also sometimes met with, particularly in fever subjects. In order, therefore, to find the true state of the tissues, they must be carefully separated. In the healthy state, while the animal is alive, the mucous membrane is transparent, white, or of pale roseate hue, which becomes brighter red, during the process of digestion, or when fæces accumulate in the colon and cænum. In thickness it varies, decreasing from the stomach to the rectum, where it is only like thin cuticle. Its consistence and adhesion is in direct ratio to the thickness. In inflammation it loses its transparency, increases in thickness, and where it is in patches, which are from the size of a crown to that of a shilling, these rise above the adjacent healthy surface, and are glossy and rugous. Some of these, instead of being red, are whiter than natural, supposed a consequence of an old inflammation terminated by induration. Sometimes the mucous coat becomes soft and even liquid, an occurrence which rapidly takes place, as Mr. Brodie found on exhibiting corrosive sublimate. The white patches just mentioned are sometimes found in this state, and it is also met with in the large intestines in chronic

diarrhœa. The same tissue also sometimes presents reddish or brownish vegetations, somewhat like the papillæ of the tongue, concave, divided, and moveable. They occurred to Orfila, in the stomach of a man who had taken powdered cantharides.

The SECRETIONS of the intestines, though much altered by disease, cannot be examined with much accuracy, in consequence of their mixture with the bile, the food, &c. Sometimes the mucus, instead of being viscid, consistent, and ropy, becomes like thin serum; at other times, as in dysentery, it concretes and forms false membranes, which, however, M. Andral has never seen organized. Blood is often found mixed with the mucus, probably from extravasation. This secretion is sometimes greatly increased. Morgagni gives a case in which a woman passed, *per anum*, forty pounds of clear lymph in one day.

The inflammations and other morbid conditions of the mucous coat are but seldom extended to the cellular and muscular tissues, though the former is sometimes inflamed or scirrhus, and the latter softened, or thickened, or hardened. The most common effect, however, is contraction of the muscular coat from propagated irritation, which, in one case related by M. Tartra, of a person who had taken nitric acid, had reduced the intestines to the size of a goose quill, and the whole of them could be held in the hollow of the hand. This contraction is held to be the chief cause of invagination and intus-susceptions, which indeed M. Peyer produced artificially by irritating the intestines of frogs. M. Andral says, however, that this is seldom if ever produced by inflammation; it may often arise, as experiment demonstrates, at the time of death. These intus-susceptions are most common in the ileum, while they are rare in the duodenum, the colon, and the rectum. Sometimes they are numerous in the same subject; the upper portion is usually sheathed in the lower, from some inches to two feet.

ULCERATIONS are rare in the stomach, still more so in the duodenum and jejunum, but frequently in the lower portions of the canal, except the rectum, in which intestinal ulceration occurred. In fifty-three dissections, nine were in the stomach; one in the duodenum; nine in the jejunum; twenty-six in the lower portion of the ileum; ten in the cæcum; eighteen in the colon; and one in the rectum. M. Andral gives a very minute description of the appearances and extent of intestinal ulcers; but it appears to us that, like a great part of his paper, it is much more curious than useful, as we rarely find him saying a word about the previous symptoms.

Perforation is the most troublesome result of ulceration, and

may extend to the exterior, to another organ, or to the peritoneal cavity. The first is exemplified in artificial anus, stercoral fistulæ, and in adhesions between the perforated intestines and the abdominal parietes; the second, in cases where communications have been formed between the intestines and the bladder, &c.; and the third, in effusions of intestinal secretions into the serous membrane of the peritoneum. The latter often proves rapidly mortal in individuals in apparent good health, of which M. Andral gives a case in which a perforation was found of two lines diameter, a foot above the ileo-cæcal valve. In some rarer cases of perforation, effusion does not take place, but it may be possible that the perforation was made by the anatomist.

The termination of the inflammatory process may either be in suppuration, gangrene, or induration. The suppuration is usually established at the free surface, but may form a submucous abscess, as in the tonsils. M. Andral has never seen an abscess of the stomach. He thinks gangrene of the intestines more rare than is commonly imagined, and those described in books are by no means precise. Eschars are often found in typhoid subjects, like those of the skin, or like those from blisters.

There appear then to be three stages of intestinal inflammation, as in Laennec's account of pneumonia. The first an injection of the mucous coat; the second, an alteration of its texture; and the third, disorganization and ulceration. The two last cannot be mistaken, though the first may be confounded with mere engorgement of the vessels or stasis of the blood—the remora and error loci of the humoral pathology. This depends on the state of the liver, the vena portæ, the heart, and the lungs at death; but after all possible discrimination, inflammation can seldom be distinguished from mechanical injection; and of course many of M. Andral's observations must appear at least doubtful.

In treating of adventitious tissues, M. Andral distinguishes tubercles, and the scirrhus, erectile, melanose, and adipose tissues, besides serous cysts, and intestinal œdema; but we find very little in his remarks that is practical, though it might interest the curious to have minute and elaborate descriptions of all the varying forms of tumours, &c. in the intestinal canal. Bichat denied the existence of œdema of this kind; but M. Andral has witnessed it repeatedly.

The most important, because the most practical part of M. Andral's paper relates to the diagnosis and treatment of diarrhœa and dysentery. These have long been considered as ari-

sing from intestinal inflammation. In some cases, however, M. Andral found the whole canal very pale, particularly in old cachectic subjects, whose stools had been watery and copious. Morgagni gives similar cases where the intestine was thinned by atrophy, till it became, as Bonet says, as thin as a cobweb, and the patients died of debility, without a trace of inflammation. In these cases strengthening and astringent treatment is the only rational practice. At other times, tubercles under the mucous coat produce diarrhœa by irritation, in the same way as they excite expectoration and cough in the bronchiæ; but the diarrhœa in this case does not become permanent till ulceration ensue. There is no doubt, however, that inflammation often exists either as a cause, consequence, or accompaniment of diarrhœa and dysentery. Numerous cases have proved that acute or chronic diarrhœa results from inflammation of the small intestine, without the large participating, contrary to M. Broussais, who says enteritis is always accompanied with diarrhœa, except where colitis is present. In dysentery, the tenesmus indicates inflammation of the rectum.

Can these different states of the intestines be distinguished during life? In many cases it is possible, as in abdominal pain, burning skin, frequent pulse, and membraniform or bloody dejections. In ulceration, however, every sort of pain is often absent; while violent pain again may exist in the abdomen without inflammation, as in colica pictonum, and nervous colic which yield to drastic purgatives and other stimulants. Even the stools are not always to be trusted, as bloody stools may arise in atonic cases similar to scorbutic hemorrhages in the skin and synovial membranes, and the intestines may be found to be sound on dissection. M. Andral thinks that ulceration ought not to forbid tonics and astringents, as these will often succeed in some cases, while in others of similar symptoms they will fail: in the same way as some ulcers will bear stimulants, while others apparently the same in character will be aggravated by their use.—*Journal of Foreign Medicine.*

MR. SWAN'S *Practical Observations on Apoplexy.*

Case 1.—Mrs. Ciscoby, æt. 70, after walking about two hundred yards, ran about twenty more. She immediately complained of being out of breath and faint, and in a very few minutes expired.

A few days before she died, she had been twice very dizzy, and in consequence fell down. She had for a long time been

troubled with a difficulty of breathing, and her legs had swelled a little ; in every other respect she enjoyed perfect health. She was not extremely corpulent, but was sufficiently fat to show that her body was well nourished. This account I received from her friends.

Examination.—On opening the head forty-eight hours after death, all the vessels were found filled with black blood. On cutting into the brain, it was rather softer than is usual at her age, but it had a healthy appearance, though every part of it was gorged with black blood, as in a person who has been hanged. There was rather more fluid than usual in the lateral ventricles. There was some fluid about the base of the brain. The basilar artery had some spots of ossification on it, otherwise every part of the brain and cerebellum, and the part of the medulla spinalis examined, had a perfectly healthy appearance.

On opening the chest, the right lung was perfectly sound, but was distended with air. The left adhered every where to the side of the chest, and it was so soft as to give way on being gently pressed by the fingers, and therefore was not separated without some difficulty. It had not an altered colour, but had a pulpy appearance. There was a small quantity of fluid in the chest.

There was more than an ounce of fluid in the pericardium ; but the heart had a healthy appearance, except in one spot, about the size of a sixpence, towards the side of the apex, which was white, as if inflammation had formerly existed there. There were some slight ossifications in the mitral valves. The aorta was very large, and had many patches of ossification on it.

Every part in the abdomen was sound, except that there had been a femoral hernia ; and a small portion of the cœcum was thickened, which, in all probability, was the effect of a frequent protrusion.

In this case, there was no appearance of change of structure to account for death ; and it is most probable that, if the patient had been bled and purged when she felt the dizziness, her life might have been preserved.

In this case, the blood either could not pass through the lungs, or was not oxygenized by them ; so that the accumulation of venous blood in the brain destroyed life.

I conceive that apoplexy depends more frequently on the difficult transmission of blood through the lungs, or on its not being properly oxygenized, than is imagined. A stomach overloaded by wholesome food, or containing a small quantity of indigestible food, deranges all the parts to which the branches of the par vagum are distributed ; and therefore the lungs do not perform

their functions ; in which cases, though bleeding is absolutely required, the greatest quantity of blood may be taken away without affording complete relief ; therefore, if a person is seized with apoplexy, and bleeding has not afforded relief, and there is no symptom of paralysis, and it is probable the stomach contains undigested food, it is advisable to give an emetic.

Case 2.—A boy, about fourteen years old, after working hard the whole day, ate a very hearty dinner. He immediately became insensible, and continued so several hours. I bled him, but he was not in the least relieved ; I then gave him an emetic. After some time he vomited up what he had eaten, and became immediately sensible.

Case 3.—A gentleman, about fifty-eight years old, was seized with apoplexy. I took much blood from him, but he was not relieved. I gave him an emetic, which made him eject the remains of his dinner, which he had eaten six hours before, and he was immediately relieved.

Case 4.—A little girl, nearly three years old, could not eat her breakfast as usual ; and shortly after complained of being sleepy. In the course of a few hours she became insensible, and was seized with convulsions, which were so severe that I every moment thought she would expire. I was asked to bleed her, but refused doing this, because she appeared so nearly exhausted ; and I firmly believed such practice might prove fatal. I gave her, in divided doses, nearly forty grains of powdered ipecacuanha. At length, by irritating the throat with a feather, she vomited a quantity of very thick mucus. The convulsions immediately left her, and she shortly after spoke. In a few hours she became perfectly sensible. She was purged, and had four leeches applied twice to the temples in the course of the day ; and a few days after she was quite well.—*Med. Repository.*

Case of Hæmorrhage from one of the Fallopian Tubes. By M. GODELLE, M. D.

A female, while suckling, became the subject of a violent paroxysm of anger, a few hours after which she was seized with severe colicky pains, accompanied with retchings and very frequent stools. The abdomen soon afterwards became hard and tumid ; the pains more violent ; and cold perspirations, hiccup, syncope, and death, supervened within nine hours from the first attack of pain. The body had been interred ; but owing to a report that the individual had been poisoned by her husband, exhumation was ordered, and the body inspected.

Dissection.—The head and thorax presented nothing remarkable. The abdomen, which was tumid, contained within its cavity more than eight pounds of blood, separated into clots of coagulum and a reddish serum, and situated chiefly in the hypogastrium, between the bladder and womb on the one side, and the small intestines on the other. The mucous membrane of the digestive tube was particularly examined from the mouth to the anus; it presented no marks of disease, excepting a slight redness at one point, in the small intestines, where two prune-stones were lodged. An oblong perforation, with irregular and torn-like margins, about an inch in circumference, was discovered in the texture of the right Fallopian tube: this opening was surrounded by a reddish areola, the rays of which extended about three lines from the margin of the perforation. The rest of the peritoneum was examined with the most scrupulous attention, and it did not appear that it could have permitted, at any other point, the escape of the smallest quantity of blood, not even by means of transudation, as it retained, throughout its extent, its natural character. The uterus possessed a blanched appearance, and was altogether exsanguineous: it contained about half an ounce of mucus, but not a drop of blood.—*Archives de Med.*

Case of Hæmorrhage from the Mucous Surface of the Small Intestines. By E. A. LLOYD, Esq.

The patient (a young gentleman 14 years of age) was at school; and two days before he died, feeling a little unwell from slight uneasiness in his bowels, remained out of school, and took an opening draught. The medicine operated in the course of the day, and the next morning he was apparently so well that his schoolfellows accused him of shamming, and it was determined he should go into school, as usual, the following day. In the course of the night, however, or rather early in the morning, he was seized with severe pain in the abdomen, which rapidly increased in violence, and in a few hours terminated in syncope and death. The pain came so suddenly and violently and was so wholly unaccompanied with other symptoms of acute disease, that an eminent Physician, who saw the patient a short time before his death, did not hesitate in ascribing it entirely to spasm. During the attack, the countenance was pale, and the pulse small and rapid. The abdomen felt extremely hard, and pressure on it occasioned uneasiness, but not acute pain.

The body was examined about twenty-four hours after death.

On the cavity of the abdomen being opened, it was found to contain a considerable quantity of bloody serum, but without the slightest appearance of peritoneal inflammation having existed. The greater part of the small intestines was observed to be of a very dark red colour, and their veins and those of the mesentery were exceedingly turgid with blood. Exclusively of the change of colour occasioned by the congested condition of the vessels beneath, the peritoneal coat of the intestines appeared perfectly healthy, and no adhesion whatever had taken place between the different convolutions. Underneath the peritoneal coat of the diseased portion of the small intestines there were numerous minute spots of extravasated blood, and also between the layers of peritoneum forming the mesentery. The glands of the mesentery were of a dark colour, and somewhat enlarged, but perhaps not more so than the excessive fulness of their blood-vessels must necessarily have occasioned. At one point, near the termination of the *intestinum ileum*, there appeared to be a small tumour, but on examination it was found to be merely a thin coagulum of blood, about the size of a shilling, lying underneath the peritoneum, on the surface of some of the enlarged glands. The duodenum, upper portion of the jejunum, and the large intestines, were of their natural colour, and appeared perfectly healthy. The stomach also was in every respect in a natural and healthy state.

On cutting open the *intestinum ileum*, it was found that a large effusion of blood had taken place into its cavity; that its inner coat to within an inch of the *cæcum* was of a dark crimson hue; and that the mucous glands were enlarged, giving the internal surface of the intestine in many parts a granular appearance. The whole of the internal surface of the diseased portion of intestine was lined with a thin coagulum; but when this was removed, and the intestine washed in warm water, it retained its crimson colour. On examination, the internal coat of the lower two-thirds of the jejunum was found in the same state as that of the ileum, and from it effusion of blood had equally taken place. The diseased portion of intestine seemed equally affected through its whole course, so that the line of separation between it and the sound intestine was most distinctly marked.

The quantity of blood effused could not, of course, be precisely estimated, but I consider that there must have been at least between five and six pounds. In the wash-hand basin, in which the intestines were placed for examination, three pounds were collected; into the cavity of the abdomen, too, before the intestines were removed, a considerable quantity had escaped;

and also, there was that which was coagulated and remained adhering to the inner surface of the intestines. Moreover, it appears to me that in estimating the quantity of blood effused, we should also take into consideration the pound and a half of bloody serum found in the cavity of the abdomen; for that, I have no doubt, had transuded through the coats of the intestines and veins, as the blood in the cavity of the intestines, though not wholly coagulated, was much thicker than natural, or than what is usually found to be the case when blood is effused from a mucous surface. There are facts before the public to prove that such transudation may take place, and, therefore, it is unnecessary for me on this occasion to offer any additional proof respecting it.—*Lond. Med. Repository.*

Case of Congenital Hydrocephalus. By W. C. DENDY, Esq.

A BOY, ten weeks old, was presented at the Dispensary for the Diseases of Children, in June, 1821, with a diaphanous tumour on the left side of the head. The mother reported the labour to have been natural, and the child's general health to have been apparently good for the first eight days, after which it began to exhibit symptoms of constitutional derangement: an aphthous eruption appeared in the mouth, the bowels were disordered, and discharged frequently green, liquid fæces: emaciation supervened, but it still continued to suck well, and the stomach did not seem much deranged.

At the time of my first seeing the child, small doses of calomel and the cretaceous powder had, in some degree, improved the appearance of the stools. The emaciation, however, continued, and the tumour rapidly increased in size. Considering that no method of cure, by internal remedies, could be employed with any hope of success, I resolved to adopt the plan introduced by Sir Astley Cooper into the treatment of spina bifida, and put in practice, in a similar case to the present, by Mr. Earle. I accordingly punctured the tumour, which, at this time, measured upwards of six inches in circumference, four and a half at its long, and three and a half inches at its short diameter. A small portion of its contents was evacuated. No epileptic symptom supervened on pressure. Puncture of the tumour was thrice performed, in the space of nine days, and about eight ounces of water removed at the three operations. No unpleasant symptom supervened until some hours after the last performance of puncture, when the child appeared slightly convul-

sed. It died on the following day, which was the tenth from the first operation.

Dissection.—On dividing the integuments over the tumour, the coronal, lambdoidal, and squamous sutures, were seen nearly united by cartilage. The left parietal bone was nearly divided in two by a wide opening of about two inches in length, and half an inch in width. Around this cleft the pericranium was lined with a membrane, forming the internal paries of the tumour, which was considered to be the dura mater protruded by the effused fluid which it contained. The edges of this cleft were cartilaginous, ossification not having advanced farther than the central portions of the halves of the parietal bone, into which halves the effused and protruded fluid had divided it. Cellular bands crossed the parietal opening at both its ends, and firmly connected its edges. On looking through this cleft, a considerable portion of the cerebrum appeared to be wanting. On removing the parietal bone and the left hemisphere of the brain, the ventricle of that side was exposed, and the communication between it and the external tumour, through its ceiling, part of which was wanting, was readily seen in that direction. Owing to the deficiency of the cerebral substance in this situation, the ventricle and tumour formed one cavity, which, instead of the usually delicate membrane of the ventricle, presented a layer of lymph, into which vessels were seen to ramify. The substance of the brain around this membrane was softer than usual. On the plexus choroides there was a small tumour, apparently arising from a varicose state of vessels, about the size of a shot.—The thorax and abdomen were not opened.—*Lon. Med. Repos.*

Case of Melanosis. By Sir ANDREW HALLIDAY.

JOHN HOWSTON, ætatis fifty-one, March 18th, complains of pain of the breast and both hypochondriac regions, increased on pressure, full inspiration, and coughing. The pain of the hypochondriac regions dart to his shoulder when he lies on his right side ; pains severe also in lumbar region, and increased on pressure and when he moves in bed. Is much affected with cough when he lies on his left side. Expectoration difficult.—Pulse 108. Sputum thick, and in small quantity. Tongue clean. Headach. Heat 101. Has some difficulty in passing his urine. Bowels very constipated. Was attacked about five weeks ago with pains of knees, which left him about a fortnight after ; and the above symptoms came on since that time, and

have continued the same. He has taken some medicines, but without relief. * * * *

Dissection.—April 4th.—When the body was laid out for inspection, there were observed several black spots on the skin, and when cut in two they presented a dark medullary appearance. On examining the brain, some of these were found to penetrate the skull, so as to render it of a dark colour, but not to soften it. Several of these little black tumours were seen on the surface of the dura mater. There was considerable effusion under the arachnoid coat, but none in the ventricles. The brain was rather softer than natural.

When the integuments of the thorax were reflected, several of these dark spots were seen protruding through the parietes, and some were attached to the cartilages of the ribs. On opening the thorax and abdomen, all the viscera were found to be perfectly *studded* with these little black tumours, varying in size from that of a pin's head to that of a chesnut. On cutting out the lungs and other viscera, the tumours were found to penetrate their substance. Those of the liver were the longest; some of these varied in colour, approaching to white. All of them had the same medullary texture.—*Med. Rep.*

DR. COPLAND on Rheumatism.

The most important topic which has usually been connected with the pathology of the *muscular system* is that which relates to rheumatism. Respecting the intimate nature of this disorder we are still insufficiently enlightened, and it appears to us even doubtful how far the generally received opinions with regard to it are correct: we, therefore, readily attend to such facts as are calculated to advance our knowledge on the subject. The translation of this affection to the heart has become of so frequent occurrence, that it is no longer looked on as an unusual circumstance. We are constantly hearing of instances in which it has proved fatal, although it is not necessarily so; and, in a period comparatively short, and in the course of opportunities by no means very extensive, we have ourselves been consulted in three cases wherein this supervention of disease had taken place, as was proved by their termination and by post mortem inspection.* Recently a case of this description has

* On consulting our notes, we find that six cases have come under our notice within the space of four years. Five of these were distinctly of this
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been recorded by Mr. A. Armstrong. In this instance, and in all others that have come to our knowledge, the muscular texture of the heart presented fewer and less marked appearances of disease than its serous envelopes : indeed, rheumatic metastasis does not appear to attack the muscular parts of internal organs ; the serous membrane seems to be the obnoxious tissue ; and although those surrounding the heart frequently experience its invasions, no organ or viscus of the body, in which this structure exists, appears to be entirely exempt from it.

The frequent translation, or rather conversion of this disease to one of an internal texture, being so commonly observed in modern practice, it becomes a matter of importance to speculate respecting its cause, and to inquire how far the depleting and antiphlogistic plan of treatment, at present so generally employed, may contribute to its occurrence. This mode of practice in rheumatism has been entirely founded on generally received notions of its pathology, which have not undergone that strict investigation which might have been expected from the inquiring spirit of the age. It would be a subject of some interest to inquire how far the conclusion, that rheumatism is inflammation of a particular texture, is supported by pathological facts, or even by analogy. There are none, in our opinion, which can be adduced, except those which are derived from the appearance of the tissue affected in the cases in which conversion of disease has taken place, from the swelling and redness of the surface sometimes observed in other instances, and from the state of the fibrous and serous membranes, in protracted or severe cases of the disorder. These are not, however, satisfactory proofs that this affection is inflammation of the texture in which it is seated ; for, in transferred disease, the subsequent ailment may be different, and it is so in many of its characters, from that which previously existed ; and we can have no farther reason to conclude them both to be the same, because the former disappeared on the supervention of the latter, than we have to infer that, because a blister removes a pain distinctly nervous, or any other affection unconnected with inflammation, therefore, this affection must have been inflammatory, otherwise inflammation of another part could not have removed it. The other proofs that have been noticed are still

description—one was doubtful. Of these two recovered, but presented, for a considerable time, slight symptoms referrible to the heart. In these depletion had been employed, with the exception of one, in which violent hypocatharsis was produced, which immediately arrested the external disease, and as quickly induced the fatal disorder of the heart.

more weak, for we well know that the inflammatory appearances that have been observed in external parts or in joints, supervene only in the course of the disorder, and are, we contend, the consequences of the disease—are a morbid condition of the capillaries induced in them consecutively, owing to the primary derangement of the nerves of the part, and chiefly of these supplying those vessels; which morbid condition, though approaching in many of its characters to chronic or subacute inflammation, differs essentially in its nature from the phenomena, which taking place, in an idiopathic manner, in the capillaries of a part, constitute inflammation of that part. We cannot, at present, speculate farther on this subject, but leave it to the consideration of our readers, with the expectation of engaging in it again on a more legitimate occasion.—*Med. Rep.*

IV. MATERIA MEDICA AND PHARMACY.

Mr. CHURCHILL'S *New Cases of Acupuncture.*

If acupuncture, be established to be “so painless and convincingly efficacious,” as Mr. Churchill represents it, he deserves our warmest thanks for introducing it into notice. We understand that the practice is rapidly gaining ground, and a short time will determine its character. He gives three cases of its success in rheumatism. A gardener, aged 50, had been some years subject to erratic rheumatism, which at last fixed in the left deltoid and pectoralis major, and refused to yield to cupping, blistering, guaiac, &c. A needle was pushed into the deltoid muscle, an inch in depth, when the pain entirely ceased in this part, but increased in the pectoralis major, which was next pierced, and removed the pain altogether. In a week or two all debility had gone, and he felt no remains of the disease. The next case was that of a man aged 45, who had intense pain in his back, from working in a damp cellar. He had been subject to lumbago. Two needles were pushed to the depth of two inches into the muscles of the loins; and as this was not sufficient, other two were pushed into the lumbar muscles. A few minutes after, he said he felt no pain, but was incredulous of his cure till he found he could walk with ease. Two days after he was well enough to resume his work.—A man, aged 48, with violent lumbago, had a needle introduced on each side of the spine, and on the pain instantly shifting to the upper part of the sacrum, it was pursued thither, and dislodged by another needle. Dover's powder was prescribed, and the patient got well.

Foreign Jour.

M. MAGENDIE on Strychnine and the Resin of Nux Vomica.

The cases in which strychnine may be used, are, according to M. Magendie, general and local diseases of debility, particularly in all kinds of paralysis. The mode of employing it is in pills, containing from a twelfth to an eighth of a grain, and it is necessary, to make them keep, to cover them with gold or silver.

The resinous extract of nux vomica has similar properties to the strychnine, but it has the disadvantage of varying in its medicinal strength; whereas the strychnine is uniform. M. Edwards cured with it a case of amaurosis, complicated with paralysis of the superior palpebra. M. Magendie has seen it useful in impotency, incontinence of urine, and in drowsy debility and dyspepsia. A single grain, in form of pill, given at night, is the dose for producing tetanic symptoms, though it may be increased from four to thirty-four grains, according to the quality of the medicine, and the strength of the patient. To produce the milder effects, half a grain, or a grain daily, is the proper dose.

Journal Foreign Med.

Mr. Blackett on Belladonna.

The particular preparation of this medicine, which I have been in the habit of using, is a very strong tincture made from the extract in the following proportions: take ten drams of the most carefully prepared extract of belladonna and one pound of proof spirit, macerate for fourteen days, and then filter. I endeavour to procure the extract in a state of its greatest activity, and possessing the virtues of the plant undiminished in the preparation, and I consequently find a single drop of the tincture which is made from it to be more efficacious than a quarter of a grain dose of the extract, as it is usually obtained from druggists.

I have frequently employed this tincture in cases of mania, in various forms of convulsions, in hysteria, and in pertussis, with decided efficacy. In all cases of its internal use, I have commenced with small doses, generally with two or three minims in the day. I have been led to embrace this cautious mode of commencing the remedy, because I have found that when given at first in a larger dose, owing to peculiar states of the constitution, especially in old subjects, it sometimes depresses the powers of life to a greater extent than was wished. The rapidity with which I have increased the dose, or the extent to which I have carried it, has always been regulated by its effects, by the circumstances of the case, and by the constitution of the patient; always keeping it in mind, that its effects occasionally are not very marked for some time, when they suddenly evince them-

selves in a very decided manner ; thus showing that, in some instances, it does not act upon the nervous system until its exhibition has been carried to a certain extent, when its effects are quickly expressed throughout the whole frame.

In several forms of cutaneous or superficial inflammation, I have experienced the greatest service from the external use of this tincture, either when added to a lotion, or to any ointment which appeared most suitable, in other respects, to the particular nature of the case. When I have employed it in a lotion, a dram of the tincture to eight ounces of the liquid has been the proportion adopted, and in this form I have found it very beneficial in external inflammations and in irritable ulcers.

I have used the extract either alone, or combined with some ointment, with decided advantage, in spasmodic stricture of the rectum ; and I have found it useful in gonorrhœa, especially when chordee was present, when conjoined with double the quantity of mercurial ointment, and rubbed along the course of the urethra.—*Med. Repository.*

MEDICAL VARIETIES.

DR. HUME on the late Influenza in Scotland.

* In the sketch I now give of of the epidemic, or Influenza, which has prevailed in this neighbourhood, I describe merely what I have myself seen, and have purposely refrained from reading on the subject, or consulting the accounts of former epidemics of a similar kind which have been handed down to us. In short I have copied from nature not from books.

In almost every instance, the complaint began with excessive headache, generally across the forehead and just above the eyes ; and this, particularly in children, was sometimes felt a day or two before any febrile symptom made its appearance. The patient at the same time was seized with sleepiness, dizziness, dimness of sight and a degree of languor which was almost insupportable even by the stoutest frames. These were generally followed by shivering or a universal feeling of cold, accompanied by pain over every part of the body, but particularly in the

* Dr. Most, of Hamburgh, predicted that the influenza would make its appearance last year somewhere in the North, and would advance southwards. He founded his prophecy, on observing that it has hitherto appeared every twenty years ; namely, 1742, 1762, 1782, 1802, and of course, it behoved to appear in 1822.—*Ed. Foreign Journal.*

knees, back, neck, and shoulders. The eyes became painful, red, and swollen, and could not bear light. The skin now became hot and feverish. The patient complained of soreness, and a kind of choking in the throat and could not speak without difficulty. There was a constant watery discharge from the nose. The eyes also watered and glistened and the face became flushed. There was a severe cough and sometimes as much pain in the chest as in inflammation of the lungs. In some instances the cells of the lungs seemed to be quite gorged with phlegm. The pulse varied from 80 to 110; and in general was strong and full when the hot stage was fairly established. In most instances the tongue was white and coated, but in children it was often little changed from its natural appearance.

There was often great oppression at the stomach, and when the patient vomited, whether naturally or from the action of medicine, pure bile, or bile of a green colour, or a putrid kind of matter was evacuated, and with the speedy remission of the most distressing symptoms. The stools were dark and fœtid. The urine was little changed. Many patients perspired freely; others had hardly any perspiration. The cough was the most troublesome symptom and remained longer than all others.

Such was the general case of the complaint, though it was greatly modified by the constitution of the patient. In some, perhaps a week before the fever, the first symptom was pain in the fingers, gradually extending up the arm, and thence over the whole body. It also began with excessive pain in the bowels, not followed by purging. In others it began with violent pain or cramp in the stomach, followed by vomiting; and in these it had much the appearance of gastritis. In some the pain in the throat was never present. It always was in its severest form, when it attacked an already diseased habit; and in such, pustulous eruptions appeared about the mouth and nose.

It attacked every age and sex, from the age of seven months to that of ninety years; but the younger and healthier the subject, the sooner was the disease terminated. After two days illness there was sometimes a complete remission, the fever returning next day; but frequently the crisis was very sudden, a patient being confined to bed one whole day, and walking about the next, almost quite well. Relapses not unfrequently occurred; and in those the disease was often tedious. Some, after several weeks from the first attack, still complained of chilliness, want of appetite, costiveness, pain under the false ribs of the right side, and in the throat. In such persons the evacuation was very great. In some cases coldness of the limbs remained long after all feverishness had disappeared, and in others the

knees felt as if they were bound firmly with plates of iron. At the beginning and towards the termination of the Epidemic, it assumed the appearance of other maladies, or was really complicated with them; with pneumonia in its commencement, and in its decline with scarlet fever, spurious small pox, laryngitis, gastritis, and gout. But with all this, I lost only one patient, a child of seven months affected with morbus cæruleus, in whom it quickly proved fatal.

In most cases, as the abdominal viscera were evidently much disordered, a smart purgative was often the first remedy employed, and always with benefit. Emetics were also sometimes used, but even these did not relieve the cough so effectually as the purgative. Wherever there appeared to be any local inflammatory congestion, the lancet was employed pretty freely, even in old people; and blisters were applied near the situation of the pain. In such cases, digitalis was used with great advantage. In children, who complained of headache, besides purgatives, leeches were applied to the temples, and saline and antimonial medicines administered with decided benefit. Indeed, saline, nitrous, and antimonial medicines were found extremely useful in all cases where the patient kept his bed and submitted to continued perspiration for a few days. In old bilious habits, calomel, joined to opium and extract of Gentian, and given night and morning till the bowels were freely opened, had frequently an excellent effect. Afterwards the infusion of quassia was taken with great advantage. In the case of an elderly person, where there was a threatening of laryngitis, leeches applied to the throat and gentle purgatives were successful. The cough was relieved by mucilaginous mixtures which contained tincture of henbane and squill, or by the syrup of squill alone, or by the ammoniated tincture of opium, or, by mixtures which contained henbane, nitrous æther, digitalis, and mucilage. However, opium was seldom used, either alone or in composition; but in a few cases after venesection, when the air cells of the lungs appeared to be much obstructed, pills composed of camphire, opium, calomel and squill, and so as gently to affect the mouth, were attended with the best effects.—*Quar. Jour. For. Med.*

MEDICAL LITERATURE OF THE
UNITED STATES.

New York Medical and Physical Journal. VOL. II. NO. II.

ART. I. *Rules to Prevent and Exterminate Contagious Fevers.*

By JOHN HAYGARTH, M. D. F. R. S. L. and E. Communicated to the Editors by DAVID HOSACK, M. D. F. R. S. &c.

The distinguished writer of this paper believes that typhus "is not generated by crowded dwellings, nor by common diet, however putrid : but that like the small pox it is propagated by a specific poison which cleanliness will destroy." He believes also, that typhous contagion generally remains in a latent state after it has been received into the body, from ten days to ten weeks, so that one infected by this fever may travel in perfect health to and from the remotest part of the United Kingdom. The rules of prevention require that the apartments of the sick should be constantly and freely ventilated, they enjoin strict attention to cleanliness, and advise the attendants to avoid the current of the patient's breath ; the air which ascends from his body, and the vapour arising from all evacuations. When medical or other duties require a visiter to be placed in these situations of danger, infection may be frequently prevented by a temporary suspension of respiration. Visitors should not go into an infectious chamber with an empty stomach ; and the near approach of persons covered with contagious dirt, especially in close and small rooms is to be avoided.

There is nothing particularly novel in these admonitions, nevertheless, as the result of extensive observation they are entitled to our respectful consideration, especially during the prevalence of fevers, known or suspected to be contagious.

ART. II. *Case of Osteo-Sarcoma, in which the left carotid artery was tied, and a portion of the jaw bone removed successfully.*

By Valentine Mott, M. D.

In a former number of the Medical and Physical Journal, Dr. Mott has recorded a case of Osteo-Sarcoma of the lower jaw in which the carotid artery was tied, the bone sawed through at the situation of the second bicuspid tooth, and dissected from its articulation, and the diseased mass removed. The patient died on the fourth day after the operation.

In the present number is recorded another case of the same disease, in which the operation was crowned with success.— Dr. Mott was consulted by a lady twenty-two years of age, on account of an osteo-sarcoma of the left jaw, which had existed about a year, extending from the angle of the jaw to the first bicuspid tooth, and was at the time rapidly increasing.

The carotid artery was first tied, a semicircular incision extending along the base of the jaw, from the condyloid process to the chin enabled the operator to divide the bone with a saw, at the bicuspid tooth, and also a little above the angle of the jaw, and to detach the diseased mass from the parts within the mouth by a scalpel. The ligature of the carotid artery came away on the thirteenth day, the wound of the cheek healed chiefly by the first intention, and the patient returned to her home in perfect health, on the thirty-seventh day after the operation.

ART. III. *Observations on Chronic Vomiting.* By JAMES M^r-NAUGHTON, M. D.

In the treatment of this complaint the indications are said to be, first to check the vomiting, and then to restore the action of the intestines and the tone of the stomach and bowels. Blisters are recommended, and a due regulation of diet is in all cases considered important. Cathartics are deemed necessary to keep up the regular action of the bowels, and bitters to restore their tone. Two cases are related to show the efficacy of this practice.

ART. IV. *On the prevalence of Typhus Fever in tropical climates.* By DANIEL L. M. PEIXOTTO, M. D. of New-York.

The object of the writer is to prove that typhus fever prevails in tropical climates, and that cold is not essential in the production and propagation of typhus contagion.

ART. V. *Case of Stricture of the Colon, with an account of the morbid appearances after death.* Communicated to the Editors by ABRAHAM D. SPOOR, M. D. of Troy, N. Y.

The patient suffered from great acidity, nausea, vomiting, particularly after taking food, painful spasms of the bowels, and other symptoms of intestinal derangement. During the spasms which returned every five minutes, the abdomen was sore to the touch, and her sufferings were almost intolerable, the tongue was covered with a brown fur, pulse 100, small, and hard, the respiration laborious in consequence of the distention of the abdominal viscera. Opiates in very large quantities procured but

a slight remission of her sufferings, and cathartics produced but trifling evacuations.

On dissection, the colon was found greatly distended, its valve partly obliterated; the vermiformis mortified at its extremity, and the peritoneum considerably inflamed.

“On examining the colon in its descent on the left side, there was an unusually firm attachment of the gut to the os ileum, where the sigmoid flexum lies in the concavity of that bone, and where it is naturally laid down by a process of the peritoneum. At the point where this connecting medium was attached to the colon, there was a schirrus hardness of the latter.* This morbid part, with two inches of the intestine above and below it, was taken out and examined. The hardness was found to be a thickening of the coats, or rather a schirrus stricture. The calibre of the gut was so contracted as to admit, with some difficulty, a probe to pass. Immediately above the stricture, the bowel was distended to nearly twelve inches in circumference; resembling, in some degree, a bladder blown up; but below the stricture it was much less than usual.”

ART. VI. *Case of Uterine Hemorrhage succeeded by Phlegmasia Dolens.* Communicated to the Editors by WILLIAM HANDY, M. D. &c.

The hemorrhage in this case seems to have arisen from the position of the placenta, and to have produced a most formidable state of exhaustion. “Her pulse was no longer felt at the wrist, her extremities were of a deathlike coldness, and a cold sweat was generally diffused over her,”—the countenance was ghastly—respiration laborious—there were hiccuping, nausea, drowsiness, and a constant disposition to syncope. From this state she gradually recovered under the use of cordial nourishment, and external warmth. Phlegmasia dolens supervened about twenty days after delivery. The limb continued swelled till the 11th of December, (about three months,) when she commenced a journey, to Woodbridge, a distance of eighteen miles. On the way she suffered so much from cold, as to induce her to quit the gig, and “to walk and run together, a distance of about a mile.” In the subsequent evening she was surprised to find that the swelling of her legs had wholly disappeared.

ART. VII. *Remarks on the medicinal properties of the Prussiate of Iron.* In a letter to WILLIAM ZOLLICKOFFER, M. D. from

* This morbid preparation is now in the possession of Doctor Mott.

DAVID HOSACK, M. D. Professor of the Theory and Practice of Physic, and of Clinical Medicine in the University of New-York.

Dr. Hosack has prescribed the Prussiate of Iron, in cases of intermittent fever, with surprising and unexpected success. In a case of periodical hemicrania, he has given it with the best effects, and has found it beneficial in preventing the paroxysms of epilepsy.

From four to six grains are given at a dose, and it is said never to disturb the functions of the stomach.

In the treatment of intermittent fever, Dr. Hosack speaks highly of a combination of cinchona with citric acid. One part of cinchona pulverized, two parts of citric acid and six of water, are combined, and of this composition a table spoonful is given every hour.

ART. VIII. *Case of Metastasis.* By P. S. TOWNSEND, M. D. New-York.

In this case a robust man was seized with violent pulmonic inflammation, for which he was bled copiously and repeatedly; which treatment, with the co-operation of blisters, cathartics, &c. effectually subdued his disease. But while the pneumonic symptoms were declining, inflammation of the testes supervened, followed by gangrene of the scrotum.

ART. IX. *Case of Sarcomatous enlargement, with encysted Dropsy of the Right Ovary.* By JOHN W. FRANCIS, M. D. Professor of Obstetrics in the University of New-York.

This case was mistaken for extra-uterine gestation, and the usual period of nine months having elapsed, an incision was made into the abdomen, with the expectation of removing a fœtus. Several pints of a thick whitish fluid was discharged.—Some months after this time, Dr. Mott was requested to visit the patient, and finding her in great distress from distention of the abdomen, he introduced a trocar, and evacuated nearly two gallons of fluid resembling thin glue in colour and consistence. Two weeks after this period the woman died.

“A few hours after her decease, the morbid mass was carefully examined. Upon laying open the abdominal parietes, several pints of fluid were found in the peritoneal cavity. The abdomen was filled with an immense congeries of tumours of different sizes, from that of a pea or small marble, to those of a capacity to contain several quarts: they were of various shapes, and were occupied with fluids of different degrees of consistence and colour. In some the fluid was quite thin and pale; in oth-

ers altogether gelatinous and inodorous ; and in others again the contained mass was composed of substances resembling pieces of fleshy matter, and foetid. The coats of several of the tumours differed materially from their fellows. Their thickness was various ; some were as thin as vesicles, and others were found to be solid and sarcomatous. The inner surface of some of the cysts was corrugated, and imparted a papillar feel.—There were in several places patches of indurated flesh interposed between the tumours, and sometimes they communicated with each other by tolerably large passages.

Upon examining the tumour after its removal from the body, it was found to be the right ovarium, and to have its natural attachment to the broad ligament of that side. It weighed nearly thirty pounds.

From a careful examination of the structure and connexion of the several cysts or tumours in the present case, and the variety in their contents and consistence, independently of other morbid appearances, I have no doubt as to the nature of the disease—a sarcomatous enlargement with encysted dropsy of the right ovarium. The uterus was in its natural state.”

A remarkable case of diseased ovarium, bearing a strong resemblance to the preceding, has recently fallen under our observation.

REVIEWS.

New-York Medical Repository. VOL. VIII. NO. I.

After a suspension of nearly twelve months, the publication of the New-York Medical Repository has been received. It is the oldest, and has been one of the most useful of our medical journals. We therefore wish it success, and hope it will soon regain its former rank among cotemporary publications, as a valuable repository of “original essays and intelligence relative to physic and surgery.”

ART. I. *Observations on the Bilious malignant fever, which prevailed in the city of New-York in the summer and autumn of 1822.* By CHRISTOPHER C. YATES, of New-York.

This paper relates to an epidemic which prevailed in New-York during the summer and autumn of 1822, and which led to the desertion of a large portion of the city. It was called yellow fever. We are told that our brethren in New-York differed somewhat in their opinions respecting the origin of this disease, some believing it to have arisen from domestic effluvia, while others traced it to foreign vessels. We understand, more-

over, that the advocates of the former opinion enjoyed, if they did not merit, a triumph. A large portion of Dr. Yates's paper is devoted to the pathology and treatment of this epidemic, and on this subject we observe no lack of assurance. The medical faculty were not much divided on the mode of treatment; they considered emetics inadmissible, and attempted to sooth the stomach, and enable it to retain other remedies. Dr. Yates, on the contrary, always "commenced with an emetic of the tartarized antimony. This operated successfully in all except one, out of seventeen *decided* cases that came under my care. I followed this prescription with small and repeated doses of calomel, to keep the bowels open." "I found, by giving an emetic on the first insiance that I invariably relieved the pain in the head and removed the distress at the precordia, and as often as these symptoms recurred, which they usually did within twelve hours after the first vomiting, I repeated it, and continued from day to day repeating it, till those symptoms entirely subsided."

"In cases of nausea or *incessant* vomiting, I pursued the following course to obtain the *full effect of an emetic*, which was all I desired, in order to proceed with confidence in the cure, and dissolved 18 grains of emetic tartar in half a pint of water, I directed my patient to take a table spoonful of this solution *immediaily after each time of retching or vomiting*; I soon was enabled to keep enough down to excite an *antimonial* action, and the invariable consequence was longer intermissions in vomiting, till it ceased entirely, which it did, within from one, to three hours. After the stomach became thus quite calm, I gave a *full dose* of the emetic with the intention more fully to empty the biliary ducts; this was succeeded by ejections from the stomach of large quantities of dark coloured bilious matter, and frequent copious and repeated discharges of black fetid matter from the intestines."

It appears from the above extracts that the remedy which the faculty of New-York deemed inadmissible was particularly efficacious in the hands of Dr. Yates. Of four hundred and eleven cases of this disease officially reported to the board of health, two hundred and thirty are said to have died, while Dr. Yates lost but two of the seventeen *decided* cases, which fell under his care. Such success, we should think sufficient to bring the writer and his favourite remedy into more general notice.

ART. II. *A Summary of the New Medical Doctrine of Italy, delivered as an Introductory Lecture to a course of Clinical Instruction in the University of Bologna in the year 1816—By*

M. Tommasini, *Professor.* *Translated from the French of Vanderlinden.*

This is an interesting paper, but our readers have recently had a comprehensive view of the present state of Medicine in Italy, and of the revolutions which have been effected both in principles and practice among the disciples of Rasori.

REVIEW.

A Treatise of the Materia Medica and Therapeutics, by JOHN EBERLE, M. D. Editor of the American Medical Recorder; Member of the American Philosophical Society, &c. &c. two vol. 8vo. pp. 977, Philadelphia, Webster, 1822.

Dr. Eberle, as our readers probably know, is an advocate for the humoral pathology. The reviewers, though not disposed to enter into a laboured refutation of these doctrines, object to the confident manner in which the subject is brought before the public. With this exception the work is highly commended. "The whole book throughout displays much reading and reflection, though there is abundant reason to believe that the pathology which the author has embraced has no inconsiderable agency in controlling his opinions of the *modus operandi* of medicines, to an extent we fear which may render it extremely doubtful, whether the sound practical remarks in which it abounds, may not be more than countervailed by the theory, which without appearing to be its design, it seems peculiarly fitted to teach."

Histoire des Phlegmasies ou Inflammations Chroniques, fondee sur de Nouvelles Observations de Clinique et d'Anatomie Pathologique &c. &c.; Par F. I. V. BROUSSAIS, &c. &c.
Examen des Doctrines Medicales et des systemes de Nosologie; Par F. I. V. BROUSSAIS, Chevalier &c. &c.

This paper contains a clear and satisfactory account of the doctrines of Broussais.

Cases of Nervous Diseases. By Dr. C. C. Blatchly.

CASE I.—EPILEPSY, HYSTERIA, CATAPHORA, AND CHILDISH INSANITY.

"The subject of these remarks at the commencement of her period of menstruation was attacked with epilepsy; by depletion the disease appeared to be transformed into hysteria. As it abated, she was affected with catalepsy and alternations of insanity and rationality. These affections were treated with venesection and other evacuations, epispastics and emmenagogues in the earlier part of her complaint; and afterwards with antispasmodics, chalybeates, hellebore, copper, &c. after a long pe-

riod of suffering she recovered tolerable health. In her insanity she thought, talked and acted like a silly sportive child; in her insane states she remembered nothing that was said or done, in times of rationality, but remembered what was done in her states of insanity: In her sane states she remembered nothing that was said or done in the paroxysms of her childishness: but she remembered what was said or done in her periods of rationality. Sometimes her rational, and sometimes her childish states would continue twelve, and at others twenty-four hours—when insane she was like a maniac, very sleepless at night. Thus she appeared like one having two kinds of existence or consciousness.

CASE II.—EPILEPSY, AND HEMIPLEGY APPROACHING APOPLEXY.

The patient had hysteria. Dr. B. bled her; gave her an emetic, and prescribed an epispastic and a pedeluvium. The emetic operated and removed the convulsions, which returned in two hours with violence. The next day "her eyes were stationary and the tunica albuginea reddened; one side of the body seemed paralyzed and the other stiffened by tetanic spasms." In short it was considered that her hysteria was now increased to epilepsy, which was closely approaching to hemiplegy, and almost to apoplexy. The patient was again bled copiously.—Cathartics, enemata, and epispastics, were prescribed, but she died before night. These cases we deem instructive, the practice?

Case of Hemiplegia, treated by nux vomica. By JOHN BAXTER, M. D.

A child three years and a half old, had been labouring under measles, attended with highly inflammatory symptoms. "As these abated, a slight paralysis, which was just perceptible at the height of the fever, became augmented, so that on the fifth day of the fever, the child was totally incapable of motion in any of the muscles of the right side, which was also insensible, flabby, and of a lower temperature than in health.

No use could be made of either the arm or leg of that side, while the other appeared in perfect health, if the child was placed on its feet it would fall to the ground, if not supported by some attendant—a slight voluntary motion appeared in two fingers of that side, and a soreness or pain on hard pressure along the lower limb.

On the 12th day all the bad symptoms abated, but the hemiplegia remained unaltered, and the child could not move itself without assistance—commenced taking the nux vomica, half a grain every four hours, which produced about three hours after

the second dose, universal tetanic convulsions, the hand of the paralytic side was clenched, as well as the other, the arm drawn up, the lower extremities also contracted, beside which an effect similar to that of inebriation was produced, the child being much excited and very good natured ; these effects lasted from one to two hours.

On the second day after commencing with the *nux vomica*, its good effects became apparent ; on the ninth day the malady was so far removed as to enable the patient to walk, and on the fifteenth the use of the affected side almost entirely restored, and the medicine no longer rendered necessary ; giving one more instance not only of the powerful but beneficial effects of this remedy upon the human system.

I have but two remarks further to make upon this case, viz. —That the paralytic symptoms which were evidently the effect of the high febrile excitement of the measles did not subside with the subsidence of the fever, but increased ; so that although the hemiplegia might have originated from pressure of the excited vessels in the brain ; we have no reason to suppose that it was continued by such a state of vessels, but more probably from the exhaustion, which the previous increased excitement produced.

2ndly.—Mons. Fouquier who first made practical use of this drug, has asserted that the spasmodic contractions are alone produced on the paralytic muscles ; leaving those of the healthy side unaffected. In this case its effects were alike sensible on both sides."

Case of Superfætation. By Dr. F. W. NORTON.

The patient had just been delivered of a black child, which was apparently born about a month too soon. While waiting for the placenta, "I was surprised to witness a discharge of water, and immediately afterwards there came away a perfect white and well formed foetus, apparently of the age of four months. I separated it from its attachment, and it showed some signs of life. The placenta was afterwards removed without difficulty, and the patient soon recovered her usual health.—The foetuses I have preserved ; they have been examined by many Physicians in this city, and they are so perfectly distinct in color, size, and maturity of parts and appearance, that there can remain no doubt on the mind of any enlightened physician, who would examine them, that they were conceived at different times, with an interval of at least four months ; and as little, that they are the offspring of two fathers, the first a black, and the second a white man."